

# DEPARTMENT OF DEFENSE IN-HOUSE RDT&E ACTIVITIES



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30 OCTOBER 1981

## Management Analysis Report ...

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**DEPARTMENT OF DEFENSE IN-HOUSE RDTE ACTIVITIES**

**30 October 1981**

**Prepared for:**

**US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND  
5001 Eisenhower Avenue  
Alexandria, Virginia 22333**



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## FOREWORD

THIS REPORT WAS PREPARED FOR THE US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND AT THE DIRECTION OF THE DEPUTY CHIEF OF STAFF FOR RESEARCH, DEVELOPMENT, AND ACQUISITION. THIS EDITION IS THE FIFTEENTH OF A SERIES THAT WAS INITIATED IN 1966.

EACH IN-HOUSE RDTE ACTIVITY OF THE DEPARTMENT OF DEFENSE IS DESCRIBED ON ONE PAGE IN THIS COMPILATION. THE DATA FOR 1981 ARE SUMMARIZED IN TABLES PRECEDING THE MAIN TEXT AND CHARTS AND TABLES ARE PROVIDED FOR EACH SERVICE SHOWING ORGANIZATIONAL RELATIONSHIPS AND COMMAND CHAIN.

ALL CURRENT DOD RDTE ACTIVITIES WHICH MEET THE REPORT REQUIREMENT OF HAVING AT LEAST 25 PER CENT OF THEIR BUDGET IN RDTE FUNDS ARE LISTED IN THE CONTENTS ALPHABETICALLY WITHIN EACH DEPARTMENT. SOME T&E FACILITIES WHICH DO NOT MEET THE REQUIREMENT PREVIOUSLY NOTED ARE ALSO LISTED BY SPECIAL REQUEST. ORGANIZATIONAL CHANGES DURING FY 1981 APPEAR IN APPENDIX I.

DOD INSTRUCTION 7700.9 WHICH HAS BEEN THE BASIS FOR THIS REPORT SINCE ITS INCEPTION HAS BEEN REPLACED BY A TRI-SERVICE REGULATION, AR 70-63 NAVCOMPTIST 7044.5E, AFR 80-26, DNA 7700.9A, ENTITLED DOD IN-HOUSE RDTE ANNUAL ACTIVITIES REPORT, 1 SEPTEMBER 1981. APPENDIX II CONTAINS MANY OF THE DEFINITIONS USED IN THIS REPORT AND ARE PROVIDED AS AN ADDITIONAL AID IN USE OF THE REPORT. APPENDIX III LISTS SELECTED ABBREVIATIONS AND ACRONYMS. APPENDIX IV LISTS SELECTED KEY WORDS WITH PAGE REFERENCES.

EVERY EFFORT HAS BEEN MADE TO PROVIDE ACCURATE INFORMATION, PARTICULARLY FISCAL DATA. ALL NUMBERS AND STATEMENTS HAVE BEEN THOROUGHLY EXAMINED AND IN ALMOST ALL CASES, REVIEWED WITH THE SUBMITTING AGENCY TO INSURE CORRECTNESS AND CLARITY.

NO MAJOR CHANGES HAVE BEEN MADE IN THIS YEARS REPORT VIS-A-VIS LAST YEARS.

IT IS DESIRED THAT THIS PUBLICATION BE GIVEN WIDESPREAD DISTRIBUTION IN THE DOD LABORATORIES AS AN INTERNAL MANAGEMENT DOCUMENT AT THE DIRECTOR AND COMMANDING OFFICER LEVEL AS WELL AS AT THE BENCH LEVEL IN ORDER TO ALLOW PERSONNEL AN OPPORTUNITY TO FAMILIARIZE THEMSELVES WITH THE FUNCTIONAL CAPABILITIES OF OTHER DOD LABORATORIES. IT IS HOPED THAT BY THIS MEANS LABORATORY SCIENTISTS AND ENGINEERS WILL BE ENCOURAGED TO COMMUNICATE WITH EACH OTHER ON COMMON PROBLEMS OF INTEREST TO THEIR SERVICE LABORATORIES AS WELL AS TO COMMUNICATE WITH LABORATORIES OF THE OTHER SERVICES.

SINCERE APPRECIATION IS EXTENDED TO MRS CATHERINE BERKEMEIER AND LIZ STEPHENS OF THE US ARMY MANAGEMENT SYSTEMS SUPPORT AGENCY FOR THEIR EFFORTS AND ASSISTANCE IN PROVIDING A COMPUTER PRINTOUT FROM WHICH THIS REPORT IS PRINTED. SINCERE APPRECIATION IS ALSO EXTENDED TO MRS JEANETTE MERRITT FOR HER KIND ASSISTANCE, AND TO MR EUGENE GROSECLOSE OF USAMSSA FOR HIS TECHNICAL TROUBLE SHOOTING WHICH MADE A COMPUTER PRINTOUT POSSIBLE, MR. FLOYD PURCE OF THE DEFENSE

PRINTING SERVICE IS ALSO DESERVING OF A NOTE OF GRATITUDE FOR HIS EFFORTS IN  
PRINTING THIS DOCUMENT IN A THOROUGHLY PROFESSIONAL MANNER.

ADDITIONAL COPIES OF THIS DOCUMENT MAY BE OBTAINED BY WRITING THE DEFENSE  
TECHNICAL INFORMATION CENTER, BUILDING 5, CAMERON STATION, ALEXANDRIA,  
VIRGINIA 22314.

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SUMMARY

DEPARTMENT OF DEFENSE IN-HOUSE RDT&E FACILITIES

PROGRAM DATA FOR FY 1981

	(MILLIONS)
TOTAL ANNUAL PROGRAM	9817.026
TOTAL INHOUSE PROGRAM	4096.908
TOTAL RDT&E PROGRAM	6046.385
TOTAL INHOUSE RDT&E	2626.708
TOTAL ANNUAL OPERATING COST	1041.275

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONALS
MILITARY	24559	721	6298
CIVILIAN	66422	8659	27202
TOTAL	90981	4380	33500

PHYSICAL FACILITIES (END OF FY 1981)

ACRES	8298499
-------	---------

SPACE (THOUSANDS OF SQ FT)

LABORATORY	30809.807
ADMINISTRATIVE	10440.415
OTHER	58770.759
TOTAL	100020.481

COST (MILLIONS)

REAL PROPERTY	4605.842
EQUIPMENT	4665.802
TOTAL	9271.144

TABLE 1. ARMY ROTATE ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1981

INSTALLATION	FUNDING DATA (MILLIONS \$)						PERSONNEL DATA					
	TOTAL	INHOUSE	RD&TE	TOTAL	R&D	PROF	MIL	CIV	MIL	CIV	MIL	PROF
AEROMEDICAL RESEARCH LABORATORY	5.925	5.370	4.231	3.676	78	13	6	46	17	6	16	17
AIR DEFENSE BOARD	8.689	7.671	4.894	4.358	112	85	9	8	16	9	8	13
AIRBORNE BOARD	3.509	3.509	1.299	1.299	110	39	9	8	16	6	8	6
ARMOR AND ENGINEER BOARD	13.695	13.695	8.801	8.801	231	96	9	9	58	9	58	27
ARMY RESEARCH OFFICE	55.173	0.00	55.073	0.000	2	95	9	31	2	31	2	31
ATMOSPHERIC SCIENCES LABORATORY	26.745	17.575	21.909	12.780	352	175	9	27	1	97	1	97
AVIATION BOARD	12.543	12.485	3.746	3.693	79	36	9	1	39	8	1	39
AVIATION DEVELOPMENT TEST ACTIVITY	17.556	17.556	8.099	8.099	156	94	9	1	21	22	22	22
AVIATION ENGINEERING FLIGHT ACTIVITY	7.461	7.461	6.288	6.288	66	100	9	9	26	35	9	26
AVIATION RESEARCH & TECHNOLOGY LABORATORIES	59.627	22.064	24.204	20.382	20	363	1	33	13	246	1	246
AVIONICS R & D ACTIVITY	26.210	15.021	14.298	6.275	16	264	9	4	9	161	9	161
BALLISTIC RESEARCH LABORATORY	52.389	43.034	46.961	37.779	31	717	1	107	16	417	16	417
CHEMICAL SYSTEMS LABORATORY	76.134	44.782	59.152	32.780	69	787	1	39	19	366	1	366
COLD REGIONS R&E LABORATORY	16.176	12.690	7.594	5.260	16	289	9	33	12	125	9	125
COLD REGIONS TEST CENTER	9.632	9.632	5.312	5.312	263	22	1	1	42	18	1	18
COMBAT SURVEILLANCE & TGT ACQUISITION LAB	60.286	6.110	23.997	3.500	12	158	9	2	13	92	9	92
COMMUNICATIONS - ELECTRONICS BOARD	3.543	3.543	1.554	1.554	59	31	9	0	59	11	0	11
COMMUNICATIONS - ELECTRONICS R & D CENTER	70.571	19.820	64.655	17.582	69	557	9	16	22	221	9	221
CONSTRUCTION ENGINEERING RESEARCH LAB	22.732	11.491	15.223	8.093	3	204	1	32	8	120	1	120
DUGWAY PROVING GROUND	35.325	31.594	30.026	27.423	163	624	1	15	17	77	1	77
ELECTRONIC WARFARE LABORATORY	32.201	24.862	13.475	7.750	649	220	1	9	22	74	1	74
ELECTRONICS TECHNOLOGY AND DEVICES LAB	157.216	24.280	56.551	15.963	64	412	9	6	5	286	9	286
ENGINEER TOPOGRAPHIC LABORATORIES	48.164	20.057	40.238	19.394	0	279	0	32	0	163	0	163
ENGINEER WATERWAYS EXPERIMENT STATION	50.035	11.857	27.326	19.085	15	299	1	19	5	157	1	157
FIELD ARTILLERY BOARD	67.505	56.810	19.222	17.440	20	1362	0	67	14	54	0	54
FIRE CONTROL & SMALL CAL. MMWS SYSTEMS LAB	4.090	4.090	1.208	1.208	152	37	0	0	37	5	0	5
HARRY DIAMOND LABORATORIES	66.859	52.993	30.466	22.747	14	668	0	24	16	346	0	346
HURLIN ENGINEERING LABORATORY	156.386	67.226	63.634	35.206	6	1179	0	50	2	330	0	330
INFANTRY BOARD	12.385	9.295	11.536	8.446	33	147	1	16	16	105	1	105
INSTITUTE OF DENTAL RESEARCH	4.217	4.217	1.995	1.995	122	55	0	0	2	5	0	2
INSTITUTE OF SURGICAL RESEARCH	3.366	1.641	1.810	1.093	62	27	0	2	30	11	0	11
INTELLIGENCE & SECURITY BOARD	7.860	6.782	2.719	2.441	152	81	16	3	54	31	3	31
KWAJALEIN MISSILE RANGE, MARSHALL ISLANDS	2.359	0.708	1.751	0.861	98	24	0	2	29	11	0	11
LARGE CALIBER WEAPONS SYSTEMS LAB	151.270	6.732	143.735	5.477	27	183	0	1	17	52	0	52
LETTERMAN ARMY INSTITUTE OF RESEARCH	206.000	105.805	135.074	46.904	43	1704	1	62	18	1049	1	1049
MATERIALS AND MECHANICS RESEARCH CENTER	12.443	9.977	8.698	6.432	161	112	36	14	118	27	14	27
MATERIALS SYSTEMS ANALYSIS ACTIVITY	37.009	19.979	30.354	15.796	17	656	1	63	0	239	0	239
MATERIEL TESTING DIRECTORATE	22.005	14.123	18.385	12.095	32	449	0	23	9	392	0	392
MEDICAL BIODESIGNING R&D LABORATORY	67.214	64.422	41.395	39.887	215	973	0	7	24	229	0	229
MEDICAL R&D COMMAND	10.016	5.137	6.565	4.174	36	102	4	15	21	37	4	37
MEDICAL RESEARCH INSTITUTE CHEMICAL DEFENSE	5.506	5.506	3.252	3.252	59	101	22	1	48	2	48	2
MEDICAL RSCH INST OF INFECTIOUS DISEASES	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	52	0	52
MISSILE LABORATORY	265.239	83.601	190.106	52.313	64	1231	0	55	27	630	0	630
MOBILITY EQUIP R & D COMMAND	359.852	50.549	91.887	30.112	74	1219	0	16	19	279	0	279
NATICK RD LABORATORIES	63.776	30.816	42.236	26.471	164	1687	6	74	27	428	6	428
NIGHT VISION & ELECTRO OPTICS LABORATORY	211.017	25.262	47.159	28.469	32	462	3	36	3	286	3	286
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI	28.226	16.946	27.225	15.863	33	332	1	169	34	242	1	242
RSCH INSTITUTE OF ENVIRONMENTAL MEDICINE	5.608	5.206	4.160	3.766	61	102	6	19	39	58	6	58

SIGNALS WARFARE LABORATORY  
TANK-AUTO COMMAND LABORATORIES  
TROPIC TEST CENTER  
WALTER REED ARMY INSTITUTE OF RESEARCH  
WHITE SANDS MISSILE RANGE  
YUMA PROVING GROUND

160.433	8.067	37.225	6.645	71	171	0	5	0	59	
237.999	36.525	110.340	20.447	34	543	1	14	25	290	
4.499	4.414	3.140	3.075	74	69	0	3	14	26	
61.230	48.620	44.050	32.747	463	443	160	65	438	266	
187.566	156.424	154.226	131.899	919	2736	6	57	719	1848	
54.949	52.299	43.561	43.561	383	585	0	46	63	63	
<b>TOTALS</b>	<b>3363.183</b>	<b>1358.515</b>	<b>1915.974</b>	<b>889.262</b>	<b>6622</b>	<b>23059</b>	<b>358</b>	<b>1350</b>	<b>2438</b>	<b>9857</b>

TABLE 2. ARMY ROTATE FACILITIES DATA, FY 1981

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	PROPERTY
AEROMEDICAL RESEARCH LABORATORY	10	52.747	7.797	21.884	0.844
AIR DEFENSE BOARD	0	33.154	37.090	20.183	0.009
AIRBORNE BOARD	27	3.978	3.914	39.390	12.312
ARMOR AND ENGINEER BOARD	2	63.365	50.454	88.069	0.970
ARMY RESEARCH OFFICE	6	0.000	24.840	0.000	4.576
ATMOSPHERIC SCIENCES LABORATORY	15	51.541	26.663	67.658	1.455
AVIATION BOARD	0	0.000	18.681	13.599	3.767
AVIATION DEVELOPMENT TEST ACTIVITY	1196	0.000	39.124	112.463	0.619
AVIATION ENGINEERING FLIGHT ACTIVITY	19	9.200	16.000	124.800	0.000
AVIATION RESEARCH & TECHNOLOGY LABORATORIES	127	68.848	58.673	16.370	1.612
AVIONICS R & D ACTIVITY	0	16.200	33.500	0.000	28.953
BALLISTIC RESEARCH LABORATORY	1920	511.780	11.200	40.982	26.745
CHEMICAL SYSTEMS LABORATORY	1750	361.365	14.184	310.727	20.759
COLD REGIONS R&D LABORATORY	29	80.787	30.027	128.544	13.870
COLD REGIONS TES. CENTER	647155	0.000	7.200	259.719	39.007
COMBAT SURVEILLANCE & TST ACQUISITION LAB	35	52.324	6.139	10.589	0.680
COMMUNICATIONS - ELECTRONICS BOARD	7	0.000	20.950	0.493	7.400
COMMUNICATIONS - ELECTRONICS R & D CENTER	0	81.534	36.717	0.000	0.127
CONSTRUCTION ENGINEERING RESEARCH LAB	30	56.785	34.750	20.019	0.000
CUGWAY PROVING GROUND	640911	104.825	201.133	1643.266	11.500
FT. MCNAULTH, N.J.	66000	0.000	50.400	229.776	4.652
FT. MONMOUTH, N.J.	6	218.928	74.832	119.394	6.600
FT. MONMOUTH, N.J.	0	0.081	0.032	0.007	4.500
FT. MONMOUTH, N.J.	33	90.722	7.000	13.300	28.075
FT. BELVOIR, VA.	847	1739.398	358.215	169.444	10.356
VICKSBURG, MS.	0	18.938	32.733	17.720	6.902
FT. SILL, OK.	0	84.515	86.607	24.543	0.000
DOVER, N.J.	1513	515.000	113.000	1240.004	2.451
FIELD ARTILLERY & SMALL CAL. WPN'S SYS'S LAB	2316	46.944	7.056	34.062	34.637
HARRY DIAMOND LABORATORIES	12	0.000	32.203	30.156	13.177
INFANTRY BOARD	1	4.852	5.696	14.153	21.960
INSTITUTE OF DENTAL RESEARCH	4	26.424	1.800	22.400	0.000
INSTITUTE OF SURGICAL RESEARCH	1	4.000	6.627	21.667	0.000
INTELLIGENCE & SECURITY BOARD	10	0.000	162.309	2244.364	4.412
KWAJALEIN MISSILE RANGE, MARSHALL ISLANDS	4	4335	369.030	249.577	6.903
LARGE CALIBER WEAPONS SYSTEMS LAB	9	133.198	36.506	305.309	0.000
LETTERMAN ARMY INSTITUTE OF RESEARCH	48	381.776	88.261	172.646	0.875
MATERIALS & MECHANICS RESEARCH CENTER	4	8.140	100.276	1.715	2.850
MATERIEL SYSTEMS ANALYSIS ACTIVITY	4	1361	0.000	4.751	16.885
MATERIEL TESTING DIRECTORATE	5	45.103	27.300	34.108	22.055
MEDICAL BIODEFENSE R&D LABORATORY	1	0.000	35.337	0.000	3.523
MEDICAL R & D COMMAND	31	36.426	15.345	98.429	2.070
MEDICAL RESEARCH INSTITUTE CHEMICAL DEFENSE	43	80.843	19.820	209.699	1.239
MISSILE LABORATORY	11000	664.000	224.000	251.500	165.815
MOBILITY EQUIP R & D COMMAND	1064	488.653	326.499	209.879	50.706
NATICK RAD LABORATORIES	2466	558.160	65.900	413.128	55.891
NIGHT VISION & ELECTRO OPTICS LABORATORY	38	151.800	75.800	0.000	28.214
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI	0	46.110	2.559	7.245	32.000
RSCH INST OF ENVIRONMENTAL MEDICINE	4	60.421	18.793	28.647	1.354
					3.713
					4.350

SIGNALS WARFARE LABORATORY  
TANK-AUTO COMMAND LABORATORIES  
TROPIC TEST CENTER  
WALTER REED ARMY INSTITUTE OF RESEARCH  
WHITE SANDS MISSILE RANGE  
YUMA PROVING GROUND

VINT HILL, VA.	10	3.936	29.145	3.963	3.000	5.100
WARREN, MI.	11	258.652	33.828	109.733	38.294	148.069
FT. CLAYTON, C.Z.	2625	18.000	35.925	88.556	6.874	3.078
WASHINGTON, D.C.	203	383.274	58.600	6.000	10.080	18.443
WHITE SANDS, N.M.	3790038	1341.779	578.864	3035.167	191.591	217.980
YUMA, AZ	638063	0.832	114.263	1397.891	55.809	90.977
<b>TOTALS</b>	<b>6238206</b>	<b>10077.447</b>	<b>3757.520</b>	<b>13617.699</b>	<b>1352.285</b>	<b>1631.420</b>

TABLE 3. NAVY RDT&amp;E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1981

INSTALLATION	FUNDING DATA (MILLIONS \$)						PERSONNEL DATA						
	TOTAL	INHOUSE	RD&E	TOTAL	INHOUSE	RD&E	TOTAL	MIL	CIV	MIL	CIV	MIL	CIV
AEROSPACE MEDICAL RESEARCH LABORATORY	4,359	3,923	3,321	2,920	42	58	8	10	27	25			
AIR DEVELOPMENT CENTER	263,725	146,688	159,656	99,764	263	2047	5	33	206	1132			
AIR PROPULSION CENTER	35,965	26,033	32,615	22,445	6	588	1	0	8	158			
AIR TEST CENTER	190,564	145,871	108,882	80,667	1493	2004	1	5	225	416			
ARCTIC RESEARCH LABORATORY	6,443	0,000	3,862	0,000	0	0	0	0	2	0			
ATLANTIC FLEET WEAPONS TRAINING FACILITY	28,603	4,820	6,094	0,003	100	34	0	0	32	24			
BIODYNAMICS LABORATORY	3,653	3,265	3,052	2,714	36	50	6	7	11	25			
BIOSCIENCES LABORATORY	3,895	3,885	3,639	3,639	9	6	3	0	4	0			
CIVIL ENGINEERING LABORATORY	29,348	17,122	24,988	13,979	16	320	0	29	0	162			
CLOTHING & TEXTILE RESEARCH FACILITY	2,990	2,990	1,782	1,782	1	55	0	1	1	34			
COASTAL SYSTEMS CENTER	57,607	32,285	36,114	20,026	105	618	0	25	13	287			
DAVID W. TAYLOR SHIP R&D CENTER	198,474	135,783	157,509	112,537	75	2408	1	116	52	1133			
DENTAL RESEARCH INSTITUTE	1,764	1,624	1,133	0,993	29	15	11	4	16	6			
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	6,924	2,015	4,584	1,675	14	30	1	7	5	30			
EXPLOSIVE ORDNANCE DISPOSAL FACILITY	12,247	6,794	7,457	4,618	50	167	0	2	11	44			
HEALTH RESEARCH CENTER	3,159	3,159	2,568	2,566	31	62	5	10	15	26			
MEDICAL RESEARCH INSTITUTE	19,126	17,112	16,081	12,266	251	189	47	35	59	68			
MEDICAL RESEARCH UNIT NO.2	1,531	1,531	1,166	1,166	32	58	7	4	11	25			
MEDICAL RESEARCH UNIT NO.3	2,791	2,791	1,955	1,955	34	202	9	10	13	32			
OCEAN R & D ACTIVITY	37,305	17,318	35,211	15,934	10	288	1	55	7	168			
OCEAN SYSTEMS CENTER	306,453	141,341	187,087	96,202	277	2423	2	177	53	1292			
OFFICE OF NAVAL RESEARCH	373,532	16,641	315,745	15,267	30	391	2	56	27	83			
ORDNANCE MISSILE TEST FACILITY	9,268	5,405	6,499	3,169	86	54	1	0	23	9			
PACIFIC MISSILE TEST CENTER	365,348	215,981	176,175	114,975	1000	3645	7	14	245	944			
PERSONNEL RESEARCH & DEVELOPMENT CENTER	23,319	12,651	18,399	10,054	29	288	0	84	12	214			
RESEARCH LABORATORY	277,474	179,441	233,746	151,935	140	3115	1	606	35	1338			
SUBMARINE MEDICAL RESEARCH LABORATORY	3,102	3,052	2,272	2,232	36	56	6	10	14	24			
SURFACE WEAPONS CENTER	369,235	177,721	252,633	110,226	116	4479	3	228	29	2054			
UNDERSEA RANGES DEPARTMENT	41,042	26,819	29,347	26,274	44	42	0	0	4	27			
UNDERWATER SYSTEMS CENTER	352,370	132,505	152,681	67,898	79	2669	0	86	56	1385			
WEAPONS CENTER	357,059	190,200	202,343	119,170	561	3891	1	122	41	1379			
WEAPONS EVALUATION FACILITY	9,549	8,892	2,908	2,480	121	105	0	2	21	60			
<b>TOTALS</b>	<b>3436,214</b>	<b>1695,668</b>	<b>2183,504</b>	<b>1121,555</b>	<b>5120</b>	<b>30357</b>	<b>133</b>	<b>1742</b>	<b>1280</b>	<b>12616</b>			

TABLE 4. NAVY RDT&amp;E FACILITIES DATA, FY 1981

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)		REAL PROPERTY	EQUIPMENT	COST (MILLIONS \$)
	ACRES	LABORATORY			
AEROSPACE MEDICAL RESEARCH LABORATORY	PENSACOLA, FL.	7	110,323	6,164	14,672
AIR DEVELOPMENT CENTER	JOHNSVILLE, PA.	840	852,000	83,000	654,000
AIR PROPULSION CENTER	TRENTON, N.J.	68	492,618	14,706	128,710
AIR TEST CENTER	PATUXENT RIVER, MD.	6898	962,545	358,167	3488,111
ARCTIC RESEARCH LABORATORY	BARRON, AK.	300	47,310	15,987	368,049
ATLANTIC FLEET WEAPONS TRAINING FACILITY	ROOSEVELT ROADS, P.R.	3696	0,000	14,957	182,152
BIODYNAMICS LABORATORY	NEW ORLEANS LA	1	32,014	21,578	0,000
BIOSCIENCES LABORATORY	OAKLAND, CA.	5	77,625	8,731	34,646
CIVIL ENGINEERING LABORATORY	PORT HUENEME, CA.	30	81,840	71,748	64,153
CLOTHING & TEXTILE RESEARCH FACILITY	NATICK, MA.	1	10,000	9,000	2,000
COASTAL SYSTEMS CENTER	PANAMA CITY, FL.	665	342,248	44,891	364,688
DAVID W. TAYLOR SHIP R&D CENTER	BETHESDA, MD.	325	1711,149	111,178	268,041
DENTAL RESEARCH INSTITUTE	GREAT LAKES, IL.	0	30,650	4,815	8,090
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	MONTREY, CA.	0	1,352	4,856	10,594
EXPLOSIVE ORDNANCE DISPOSAL FACILITY	INDIAN HEAD, MD.	1170	68,335	20,706	23,082
HEALTH RESEARCH CENTER	SAN DIEGO, CA.	1	19,052	7,159	0,000
MEDICAL RESEARCH INSTITUTE	BETHESDA MARYLAND	4	164,297	10,545	44,508
MEDICAL RESEARCH UNIT NO. 2	MANILA, PHILIPPINES	0	9,500	6,500	0,000
MEDICAL RESEARCH UNIT NO. 3	CAIRO, EGYPT	5	41,068	8,962	55,350
OCEAN R & D ACTIVITY	BAY ST. LOUIS, MS.	5	55,725	19,923	45,014
OCEAN SYSTEMS CENTER	SAN DIEGO, CA.	2723	1345,482	202,432	189,256
OFFICE OF NAVAL RESEARCH	WASHINGTON, D.C.	0	0,000	84,785	2,500
ORDNANCE MISSILE TEST FACILITY	WHITE SANDS, N.M.	85	5,200	30,539	172,332
PACIFIC MISSILE TEST CENTER	POINT MUGU, CA.	27084	918,746	397,508	3510,799
PERSONNEL RESEARCH & DEVELOPMENT CENTER	SAN DIEGO, CA.	1	65,860	7,080	0,000
RESEARCH LABORATORY	WASHINGTON, D.C.	919	2313,975	192,677	481,945
SUBMARINE MEDICAL RESEARCH LABORATORY	GROTON, CT.	1	40,514	14,099	0,000
SURFACE WEAPONS CENTER	SILVER SPRINGS, MD.	5348	1627,546	160,247	1303,534
UNDERSEA RANGES DEPARTMENT	NEWPORT, RI.	1042	82,130	12,464	311,500
UNDERWATER SYSTEMS CENTER	NEWPORT, RI.	367	1096,100	240,615	461,499
WEAPONS CENTER	CHINA LAKE, CA.	1135711	1195,457	429,280	4494,341
WEAPONS EVALUATION FACILITY	ALBUQUERQUE, N.M.	7	0,400	53,592	94,926
<b>TOTALS</b>		11873,9	13801,075	2668,993	16749,499
		1119,827	1119,827	1119,827	1119,827

TABLE 5. AIR FORCE ROTATE ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1981

INSTALLATION	FUNDING DATA (MILLIONS \$)						PERSONNEL DATA					
	TOTAL	INHOUSE	ROTAE	TOTAL	INHOUSE	ROTAE	TOTAL	MIL	CIV	MIL	CIV	MIL
AERO PROPULSION LABORATORY	125.343	15.740	124.219	14.616	4.5	336	4	26	36	214	99	
AEROSPACE MEDICAL RESEARCH LABORATORY	18.522	10.735	17.009	9.739	136	155	28	25	56	781	781	
ARMAMENT DIVISION	705.641	287.165	478.207	162.655	4719	3095	20	35	571			
ARNOLD ENGINEERING DEVELOPMENT CENTER	175.413	26.535	161.147	23.769	153	207	4	5	62	57		
AVIONICS LABORATORY	60.623	22.804	157.563	19.944	159	604	5	46	111	410		
EASTERN SPACE & MISSILE CENTER	278.206	93.433	0.000	0.000	965	1266	2	0	115	74		
ENGINEERING & SERVICES CNTR / RD	14.376	4.480	11.755	1.855	89	16	6	1	45	12		
FLIGHT DYNAMICS LABORATORY	108.984	28.952	93.080	23.668	189	640	2	31	121	434		
FLIGHT TEST CENTER	212.858	151.613	122.108	84.376	2988	1645	3	4	161	279		
FRANK J SEILER RESEARCH LABORATORY	1.505	1.505	0.960	0.960	23	9	12	1	14	4		
GEOPHYSICS LABORATORY	66.991	27.497	65.237	25.250	120	491	6	91	41	295		
HUMAN RESOURCES LABORATORY	30.904	13.111	25.729	10.532	124	236	6	41	71	139		
MATERIALS LABORATORY	123.533	14.332	58.883	12.534	52	312	4	65	40	245		
OFFICE OF SCIENTIFIC RESEARCH	124.754	25.381	123.583	24.710	46	96	14	25	32	38		
ROCKET PROPULSION LABORATORY	43.519	17.426	40.222	14.161	174	250	2	11	56	103		
ROME AIR DEVELOPMENT CENTER	275.841	28.524	217.149	24.156	222	1088	9	54	218	561		
SCHOOL OF AEROSPACE MEDICINE	27.547	20.354	20.547	13.351	368	269	66	34	121	95		
WEAPONS LABORATORY	171.152	73.737	155.000	57.595	650	525	36	57	343	271		
WESTERN SPACE AND MISSILE CENTER	108.877	107.477	0.600	0.000	295	362	1	2	308	363		
4950 TEST WING	84.553	80.899	66.426	62.772	665	1048	1	0	27	100		
6585TH TEST GROUP	34.821	16.580	21.114	11.677	325	261	1	3	105	186		
<b>TOTALS</b>	<b>2893.163</b>	<b>1068.902</b>	<b>1959.338</b>	<b>618.317</b>	<b>12726</b>	<b>12875</b>	<b>238</b>	<b>551</b>	<b>2544</b>	<b>4630</b>		

TABLE 6. AIR FORCE RDT&amp;E FACILITIES DATA, FY 1981

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	REAL PROPERTY	EQUIPMENT
AERO PROPULSION LABORATORY	40	229.490	41.784	105.665	29.563
AEROSPACE MEDICAL RESEARCH LABORATORY	30	97.955	1.739	200.005	10.964
ARMAMENT DIVISION	463588	320.295	1020.924	10765.171	22.500
ARNOLD ENGINEERING DEVELOPMENT CENTER	39081	1093.540	207.876	2026.055	321.723
AVIONICS LABORATORY	229	229.373	9.494	405.264	60.351
EASTERN SPACE & MISSILE CENTER	17484	129.369	1213.525	4510.214	390.754
ENGINEERING & SERVICES CNTR / RD	3	12.300	14.000	0.000	1.960
FLIGHT DYNAMICS LABORATORY	92	530.356	5.100	147.128	2.156
FLIGHT TEST CENTER	218767	102.125	263.504	7664.465	27.558
FRANK J SEIER RESEARCH LABORATORY	0	19.000	3.100	0.000	56.504
GEOPHYSICS LABORATORY	335	388.689	14.566	25.863	139.151
HUMAN RESOURCES LABORATORY	5	88.519	55.009	58.570	0.000
MATERIALS LABORATORY	15	188.750	119.141	54.123	6.617
OFFICE OF SCIENTIFIC RESEARCH	0	0.000	36.688	5.128	73.660
ROCKET PROPULSION LABORATORY	68345	419.046	85.648	4.760	23.340
ROME AIR DEVELOPMENT CENTER	1517	766.168	54.080	182.271	19.226
SCHOOL OF AEROSPACE MEDICINE	74	432.994	51.447	196.103	0.000
WEAPONS LABORATORY	702	555.629	161.356	132.261	17.862
WESTERN SPACE AND MISSILE CENTER	55860	914.964	568.103	607.327	20.216
4950 TEST WING	205	0.000	57.671	891.608	76.613
6585TH TEST GROUP	6602	386.000	12.000	165.000	300.000
HOLLoman AFB, N.M.					393.456
TOTALS	872974	6904.262	3997.955	28147.021	40.748
				2111.543	1900.900

TABLE 7. DEPARTMENT OF DEFENSE ROTATE ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1991

INSTALLATION	FUNDING DATA (MILLIONS \$)			PERSONNEL DATA						
	TOTAL	INHOUSE	RD&E	TOTAL	INHOUSE	RD&E	MIL	CIV	PROF MIL	PROF CIV
ARMED FORCES RADIOBIOLOGY R&SCH. INSTITUTE	11.297	11.297	6.753	6.753	91	131	22	16	44	49
TOTALS	11.297	11.297	6.753	6.753	91	131	22	16	44	49

SUMMARY

DEPARTMENT OF DEFENSE IN-HOUSE R&D LABORATORIES

PROGRAM DATA FOR FY 1981

	(MILLIONS)
TOTAL ANNUAL LABORATORY PROGRAM	7054.764
TOTAL INHOUSE PROGRAM	2725.908
TOTAL RDT&E PROGRAM	4858.019
TOTAL INHOUSE RDT&E	1861.125
TOTAL ANNUAL OPERATING COST	689.241

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHD	TOTAL PROFESSIONALS
MILITARY	12142	674	3735
CIVILIAN	48103	8899	22310
TOTAL.	60245	4078	26045

PHYSICAL FACILITIES (END OF FY 1981)

ACRES	1711202
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SPACE (THOUSANDS OF SQ FT)

LABORATORY	28404.885
ADMINISTRATIVE	5568.726
OTHER	25659.804
TOTAL	54683.415

COST (MILLIONS)

REAL PROPERTY	2244.200
EQUIPMENT	2830.495
TOTAL	4574.695

TABLE 1A. ARMY R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1981

INSTALLATION	FUNDING DATA (MILLIONS \$)						PERSONNEL DATA					
	TOTAL	INHOUSE RDT&E	PROF CIV	MIL	TOTAL	INHOUSE RDT&E	PROF CIV	MIL	TOTAL	INHOUSE RDT&E	PROF CIV	MIL
AEROMEDICAL RESEARCH LABORATORY	5.925	5.370	4.231	3.676	78	75	13	6	40	17		
ATMOSPHERIC SCIENCES LABORATORY	26.745	17.575	21.903	12.780	352	175	0	27	1	97		
AVIATION RESEARCH & TECHNOLOGY LABORATORIES	59.627	22.064	54.204	20.382	20	363	1	33	13	246		
AVIONICS R & D ACTIVITY	26.210	15.021	16.298	6.275	18	264	0	4	9	161		
BALLISTIC RESEARCH LABORATORY	52.389	43.094	46.961	37.774	31	717	1	107	10	417		
CHEMICAL SYSTEMS LABORATORY	76.134	44.762	59.152	32.780	60	787	1	39	19	386		
COLD REGIONS R&D LABORATORY	16.176	12.698	7.594	5.240	14	289	0	33	12	125		
COMBAT SURVEILLANCE & T&T ACQUISITION LAB	60.288	6.110	23.997	3.500	12	158	0	2	13	97		
COMMUNICATIONS - ELECTRONICS R & D CENTER	70.571	19.820	64.655	17.582	69	557	0	16	22	281		
CONSTRUCTION ENGINEERING RESEARCH LAB	22.732	11.491	15.223	8.095	3	204	1	32	8	128		
ELECTRONIC WARFARE LABORATORY	157.216	24.208	56.551	15.963	84	412	0	6	5	236		
ELECTRONICS TECHNOLOGY AND DEVICES LAB	48.164	20.057	40.238	19.394	0	279	0	32	0	163		
ENGINEER TOPOGRAPHIC LABORATORIES	30.035	11.857	27.326	10.085	15	299	1	19	5	157		
ENGINEER WATERWAYS EXPERIMENT STATION	67.505	56.810	19.222	17.440	20	1362	0	87	14	514		
FIRE CONTROL & SMALL CAL. WPN'S SYS'S LAB	66.859	52.993	30.468	22.747	14	608	0	24	10	390		
HARRY DIAMOND LABORATORIES	156.388	67.228	63.834	35.206	6	1199	0	50	2	330		
HUMAN ENGINEERING LABORATORY	12.385	9.295	11.536	8.446	33	147	1	16	16	105		
INSTITUTE OF DENTAL RESEARCH	3.366	2.641	1.816	1.093	82	27	0	2	38	11		
INSTITUTE OF SURGICAL RESEARCH	7.060	6.782	2.719	2.441	152	81	16	3	54	31		
LARGE CALIBER WEAPONS SYSTEMS LAB	206.000	105.805	135.074	48.904	43	1704	1	82	16	1049		
LETTERMAN ARMY INSTITUTE OF RESEARCH	12.443	9.977	8.898	6.432	161	112	38	14	116	27		
MATERIALS AND MECHANICS RESEARCH CENTER	37.009	19.979	30.354	15.796	17	606	1	63	6	239		
MEDICAL BIOENGINEERING R&D LABORATORY	10.018	5.137	6.565	4.174	36	102	4	15	21	37		
MEDICAL R & D COMMAND	5.508	5.508	3.252	3.252	59	101	22	1	44	2		
MEDICAL RESEARCH INSTITUTE CHEMICAL DEFENSE	15.350	8.974	13.553	7.177	75	145	27	15	44	92		
MEDICAL RSCH INST OF INFECTIOUS DISEASES	0.000	0.000	0.000	0.000	320	210	45	34	97	77		
MISSILE LABORATORY	285.239	63.601	198.106	52.313	44	1231	0	55	27	639		
MOBILITY EQUIP R & D COMMAND	359.852	50.549	91.887	30.112	74	1219	0	16	19	279		
NATICK R&D LABORATORIES	63.776	36.816	42.236	26.471	406	1067	6	74	27	426		
NIGHT VISION & ELECTRO OPTICS LABORATORY	211.017	25.282	47.159	20.449	32	462	0	36	3	266		
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI	28.228	16.046	27.225	15.043	33	332	1	160	34	242		
RSCH INSTITUTE OF ENVIRONMENTAL MEDICINE	5.600	5.206	4.160	3.766	61	102	6	19	39	56		
SIGNALS WARFARE LABORATORY	160.433	8.667	37.225	6.645	71	171	0	5	0	59		
TANK-AUTO COMMAND LABORATORIES	237.999	36.525	110.340	20.447	36	543	1	14	25	290		
WALTER REED ARMY INSTITUTE OF RESEARCH	61.230	48.620	44.050	32.747	463	443	160	65	438	264		
<b>TOTALS</b>	<b>2665.479</b>	<b>918.570</b>	<b>1368.011</b>	<b>574.627</b>	<b>2730</b>	<b>16573</b>	<b>349</b>	<b>1200</b>	<b>1249</b>	<b>760</b>		

TABLE 2A. ARMY R&amp;D FACILITIES DATA, FY 1981

INSTALLATION	SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET)		REAL PROPERTY COST (MILLIONS \$)	EQUIPMENT COST (MILLIONS \$)
	ACRES	LABORATORY		
AEROMEDICAL RESEARCH LABORATORY	10	52,747	7,797	21,884
ATMOSPHERIC SCIENCES LABORATORY	15	51,541	26,663	2,745
AVIATION RESEARCH & TECHNOLOGY LABORATORIES	127	88,846	58,673	2,272
AVIONICS R & D ACTIVITY	0	16,000	33,598	0,000
BALLISTIC RESEARCH LABORATORY	1920	511,780	11,209	40,982
CHEMICAL SYSTEMS LABORATORY				13,870
COLD REGIONS R&D LABORATORY				39,897
COMBAT SURVEILLANCE & TGT ACQUISITION LAB				
COMMUNICATIONS ELECTRONIC R & D CENTER				
CONSTRUCTION ENGINEERING RESEARCH LAB	30	56,705	34,750	20,019
ELECTRONIC WARFARE LABORATORY	6	218,928	74,832	119,394
ELECTRONICS TECHNOLOGY AND DEVICES LAB	0	8,881	6,032	0,887
ENGINEER TOPOGRAPHIC LABORATORIES	33	90,722	7,000	13,389
ENGINEER WATERWAYS EXPERIMENT STATION	847	1739,308	358,215	169,444
FIRE CONTROL & SMALL CAL. TNS SYS LAB	151	84,515	86,697	21,717
HARRY DIAMOND LABORATORY	2316	515,000	113,800	126,004
HUMAN ENGINEERING LABORATORY	12	46,944	7,056	34,962
INSTITUTE OF DENTAL RESEARCH	4	9,C52	5,696	14,153
INSTITUTE OF SURGICAL RESEARCH	1	26,424	1,890	22,480
LARGE CALIBER WEAPONS SYSTEMS LAB	4335	369,030	249,577	90,785
LETTERMAN ARMY INSTITUTE OF RESEARCH	9	133,190	36,596	395,309
MATERIALS AND MECHANICS RESEARCH CENTER	46	381,778	86,261	172,645
MEDICAL BIOENGINEERING R&D LABORATORY	5	45,103	27,390	34,186
MEDICAL R & D COMMAND	1	0,000	35,337	0,000
MEDICAL RESEARCH INSTITUTE CHEMICAL DEFENSE				8,564
MEDICAL RECH INST OF INFECTIOUS DISEASES				9,246
MISSILE LABORATORY				17,065
MOBILITY EQUIP R & D COMMAND				6,076
NATICK R&D LABORATORIES	1064	698,653	326,499	209,879
NIGHT VISION & ELECTRO OPTICS LABORATORY	2466	558,160	65,900	613,129
RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI	33	151,800	75,880	8,000
RSCH INSTITUTE OF ENVIRONMENTAL MEDICINE	0	46,110	2,559	7,245
SIGNALS WARFARE LABORATORY	4	69,621	16,793	28,647
TANK-AUTOCOMMAND LABORATORIES	10	3,936	29,145	3,963
HALTER REED ARMY INSTITUTE OF RESEARCH	11	258,652	33,826	109,733
	203	383,276	56,699	9,080
<b>TOTALS</b>				749,986
	27916	7746,669	2220,153	746,172

TABLE 3A. NAVY R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1981

INSTALLATION	FUNDING DATA (MILLIONS \$)						PERSONNEL DATA					
	TOTAL	INHOUSE	ROTE	PROG	PROG	CIV	HTL	CTV	HTL	CTV	HTL	CIV
AEROSPACE MEDICAL RESEARCH LABORATORY	4,359	3,923	3,321	2,920	42	56	8	19	27	35	11	28
AIR DEVELOPMENT CENTER	263,725	146,688	159,656	99,764	263	2447	5	33	269	113	0	0
ARCTIC RESEARCH LABORATORY	6,443	0,000	3,862	0,000	0	0	0	0	0	0	2	0
BIODYNAMICS LABORATORY	3,653	3,265	3,052	2,714	36	50	6	8	7	11	35	0
BIOSCIENCES LABORATORY	3,885	3,885	3,639	3,639	9	6	3	0	4	0	0	0
CIVIL ENGINEERING LABORATORY	29,348	17,122	24,938	13,979	16	326	6	29	6	36	0	0
CLOTHING & TEXTILE RESEARCH FACILITY	2,996	2,990	1,782	1,782	1	55	0	1	1	1	36	0
COASTAL SYSTEMS CENTER	57,607	32,285	36,114	29,026	105	616	6	25	11	267	0	0
DAVID W. TAYLOR SHIP R&D CENTER	198,474	135,783	157,509	112,537	75	2436	1	118	52	135	0	0
DENTAL RESEARCH INSTITUTE	1,764	1,624	1,133	0,993	29	15	11	4	16	0	0	0
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	4,924	2,015	4,584	1,675	14	76	1	7	5	36	0	0
HEALTH RESEARCH CENTER	3,159	3,159	2,568	2,568	31	62	5	18	15	26	0	0
MEDICAL RESEARCH INSTITUTE	19,126	17,112	14,081	12,266	251	189	47	35	59	69	0	0
MEDICAL RESEARCH UNIT NO. 2	1,531	1,531	1,166	1,166	32	56	7	4	11	23	0	0
MEDICAL RESEARCH UNIT NO. 3	2,791	2,791	1,955	1,955	34	202	9	19	13	32	0	0
OCEAN R & D ACTIVITY	37,305	17,318	35,211	15,934	10	288	1	55	7	166	0	0
OCEAN SYSTEMS CENTER	306,453	141,341	167,087	96,202	277	2423	2	177	53	129	0	0
PERSONNEL RESEARCH & DEVELOPMENT CENTER	23,319	12,651	18,399	10,054	29	226	0	84	32	214	0	0
RESEARCH LABORATORY <sup>1</sup>	277,474	179,441	233,746	151,935	140	3115	1	664	38	138	0	0
SUBMARINE MEDICAL RESEARCH LABORATORY	3,102	3,062	2,272	2,232	36	56	0	10	14	26	0	0
SURFACE WEAPONS CENTER	369,235	177,721	252,633	110,226	116	4479	3	226	29	2854	0	0
UNDERSEA RANGES DEPARTMENT	41,042	28,619	29,347	26,274	44	42	0	0	4	27	0	0
UNDERWATER SYSTEMS CENTER	352,370	132,505	152,681	67,838	79	2649	0	68	54	138	0	0
WEAPONS CENTER	357,059	190,200	202,343	119,170	561	3891	1	122	41	137	0	0
<b>TOTALS</b>	<b>2391,136</b>	<b>1257,231</b>	<b>1553,129</b>	<b>877,911</b>	<b>2232</b>	<b>23349</b>	<b>11</b>	<b>6991</b>	<b>121</b>	<b>6870</b>	<b>688</b>	<b>10870</b>

TABLE 6A. NAVY R&amp;D FACILITIES DATA, FY 1961

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)		REAL PROPERTY	EQUIPMENT	COST (MILLIONS \$)
	ACRES	LABORATORY			
AEROSPACE MEDICAL RESEARCH LABORATORY	7	110.323	6.164	14.672	3.130
AIR DEVELOPMENT CENTER	840	852.000	83.000	654.000	37.668
ARCTIC RESEARCH LABORATORY	300	47.310	15.967	368.049	13.158
BIODYNAMICS LABORATORY	1	32.014	21.576	0.000	8.400
BIOSCIENCES LABORATORY	5	77.625	8.731	34.646	1.000
CIVIL ENGINEERING LABORATORY	30	61.840	71.748	44.158	7.593
CLOTHING & TEXTILE RESEARCH FACILITY	1	10.000	9.006	3.000	0.448
COASTAL SYSTEMS CENTER	665	342.248	44.851	364.588	43.995
DAVID W. TAYLOR SHIP R&D CENTER	325	1711.149	111.178	268.041	73.472
DENTAL RESEARCH INSTITUTE	0	30.650	4.815	8.090	0.000
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	0	1.362	4.858	10.594	0.000
HEALTH RESEARCH CENTER	1	1.9.052	7.159	0.000	0.147
MEDICAL RESEARCH INSTITUTE	4	164.297	10.545	44.508	6.179
MEDICAL RESEARCH UNIT NO.2	0	9.500	6.500	0.000	0.308
MEDICAL RESEARCH UNIT NO.3	5	41.068	6.962	55.350	1.443
OCEAN R & D ACTIVITY	5	55.725	19.923	45.014	9.548
OCEAN SYSTEMS CENTER	2723	1345.482	202.432	189.258	45.964
PERSONNEL RESEARCH & DEVELOPMENT CENTER	1	65.868	7.088	0.000	0.495
RESEARCH LABORATORY	919	2313.975	192.677	461.995	93.134
SUBMARINE MEDICAL RESEARCH LABORATORY	1	40.514	14.099	0.000	1.315
SURFACE WEAPONS CENTER	5348	1627.548	160.247	1303.534	106.847
UNDERSEA RANGES DEPARTMENT	1042	82.130	12.464	311.500	25.603
UNDERWATER SYSTEMS CENTER	367	1096.100	240.615	461.499	49.909
WEAPONS CENTER	1135711	1195.457	429.280	4484.341	233.659
TOTALS	1146301	11353.229	1693.933	9146.867	749.151
					709.568

TABLE 5A. AIR FORCE R&amp;D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1981

INSTALLATION	FUNDING DATA (MILLIONS \$)						PERSONNEL DATA					
	TOTAL LABORATORY	TOTAL PROFESSIONAL TECHNICAL STAFF	TOTAL INHOUSE ROTATE	TOTAL PROFESSIONAL TECHNICAL STAFF	TOTAL MILITARY PERSONNEL	TOTAL CIVILIAN PERSONNEL	TOTAL LABORATORY	TOTAL PROFESSIONAL TECHNICAL STAFF	TOTAL MILITARY PERSONNEL	TOTAL CIVILIAN PERSONNEL	TOTAL LABORATORY	TOTAL PROFESSIONAL TECHNICAL STAFF
AERO PROPULSION LABORATORY	125.363	15.740	124.219	14.616	45	336	4	26	36	216		
AEROSPACE MEDICAL RESEARCH LABORATORY	16.522	10.735	17.009	9.739	136	155	20	25	56	99		
ARMAMENT DIVISION	705.641	287.165	478.207	182.655	4719	3095	20	35	571	701		
AVIONICS LABORATORY	160.423	22.804	157.563	19.944	159	604	5	40	111	410		
ENGINEERING & SERVICES CTR / RD	14.376	4.480	11.755	1.859	89	16	6	1	45	12		
FLIGHT DYNAMICS LABORATORY	106.984	28.952	93.880	23.668	186	649	2	31	121	436		
FRANK J SEILER RESEARCH LABORATORY	1.505	1.505	0.960	0.960	23	9	12	1	14	4		
GEOPHYSICS LABORATORY	66.991	27.497	63.237	25.250	120	491	6	91	41	295		
HUMAN RESOURCES LABORATORY	30.904	13.111	25.729	10.532	124	236	6	41	71	139		
MATERIALS LABORATORY	123.533	14.332	58.883	12.534	52	312	4	65	48	245		
ROCKET PROPULSION LABORATORY	43.519	17.626	40.222	14.161	174	250	2	11	66	103		
ROME AIR DEVELOPMENT CENTER	275.041	28.524	217.149	26.156	222	1088	9	54	116	561		
SCHOOL OF AEROSPACE MEDICINE	27.547	20.354	20.547	13.354	366	269	46	34	121	95		
WEAPONS LABORATORY	171.152	73.737	155.000	57.585	650	525	36	57	343	271		
<b>TOTALS</b>	<b>1873.681</b>	<b>566.364</b>	<b>1664.360</b>	<b>411.013</b>	<b>7089</b>	<b>8030</b>	<b>1882</b>	<b>512.1754</b>	<b>3583</b>			

TABLE 6A. AIR FORCE RAD FACILITIES DATA, FY 1981

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)		
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY	EQUIPMENT
AERO PROPULSION LABORATORY	40	229.490	41.784	105.665	56.100	29.563
AEROSPACE MEDICAL RESEARCH LABORATORY	30	97.955	1.759	200.005	10.964	22.500
ARMAMENT DIVISION	463568	320.295	1020.924	10765.171	321.723	163.727
AVIONICS LABORATORY	229	229.373	9.494	405.264	36.482	75.606
ENGINEERING & SERVICES CNTR / RD	3	12.000	14.000	0.000	1.960	2.156
FLIGHT DYNAMICS LABORATORY	92	530.356	5.100	147.128	27.558	56.594
FRANK J SEYLER RESEARCH LABORATORY	0	19.000	3.100	0.000	0.100	2.186
GEOPHYSICS LABORATORY	335	368.669	14.566	25.833	9.873	32.064
HUMAN RESOURCES LABORATORY	5	88.519	55.009	58.570	6.617	73.660
MATERIALS LABORATORY	15	188.750	119.141	54.123	23.340	19.226
ROCKET PROPULSION LABORATORY	68345	419.046	86.848	4.780	126.000	22.477
ROME AIR DEVELOPMENT CENTER	1517	766.168	54.080	182.271	27.492	53.499
SCHOOL OF AEROSPACE MEDICINE	74	432.994	51.667	196.103	17.862	26.216
WEAPONS LABORATORY	702	555.629	161.356	132.261	76.613	67.998
<b>TOTALS</b>	<b>534975</b>	<b>4278.264</b>	<b>1639.588</b>	<b>12277.224</b>	<b>740.674</b>	<b>641.066</b>

TABLE 7A. DEPARTMENT OF DEFENSE ROT&amp;E FACILITIES DATA, FY 1981

INSTALLATION	SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLIONS \$)	
	ACRES	LABORATORY	ADMIN	OTHER	REAL PROPERTY
ARMED FORCES RADIOBIOLOGY RSCH. INSTITUTE BETHESDA, MD.	10	26.523	16.047	56.540	13.395
TOTALS	10	26.523	16.047	56.540	13.395

TABLE 8 - ARMY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

	<u>COMMAND CHAIN</u>	<u>COMMAND</u>
INTERMEDIATE		
AEROMEDICAL RESEARCH LABORATORY	MEDICAL R&D COMMAND	THE SURGEON GENERAL
ATMOSPHERIC SCIENCES LABORATORY	ELECTRONICS R&D CMD	MAT DEV & READ CMD
AVIATION R&T ACTIVITY	AVIATION R&D COMMAND	MAT DEV & READ CMD
AVIONICS R&D ACTIVITY	AVIATION R&D COMMAND	MAT DEV & READ CMD
BALLISTIC RESEARCH LABORATORY	ARMAMENT R&D COMMAND	MAT DEV & READ CMD
CHEMICAL SYSTEMS LABORATORY	ARMAMENT R&D COMMAND	MAT DEV & READ CMD
COLD REGIONS R&E LABORATORY	--	CHIEF OF ENGINEERS
COMBAT SURVEILLANCE & TARGET ACQUISITION LABS	ELECTRONICS R&D COMMAND	MAT DEV & READ CMD
COMMUNICATIONS-ELECTRONICS R&D CENTER	COMMUNICATIONS-ELECTRONICS COMMAND	MAT DEV & READ CMD
CONSTRUCTION ENGINEERING RSCH LABORATORY	--	CHIEF OF ENGINEERS
ELECTRONIC WARFARE LABORATORY	ELECTRONICS R&D COMMAND	MAT DEV & READ CMD
ELECTRONICS TECHNOLOGY & DEVICES LABORATORY	ELECTRONICS R&D COMMAND	MAT DEV & READ CMD
ENGINEER TOPOGRAPHIC LABORATORIES	--	CHIEF OF ENGINEERS
ENGINEER WATERWAYS EXPERIMENT STATION	--	CHIEF OF ENGINEERS
FIRE CONTROL & SMALL CALIBER WPNS SYSTEMS LAB	ARMAMENT R&D COMMAND	MAT DEV & READ CMD
HARRY DIAMOND LABORATORIES	ELECTRONICS R&D COMMAND	MAT DEV & READ CMD
HUMAN ENGINEERING LABORATORY	--	MAT DEV & READ CMD
INSTITUTE OF DENTAL RESEARCH	MEDICAL R&D COMMAND	THE SURGEON GENERAL
INSTITUTE OF SURGICAL RESEARCH	MEDICAL R&D COMMAND	THE SURGEON GENERAL
LARGE CALIBER WEAPONS SYSTEMS LABORATORY	ARMAMENT R&D COMMAND	MAT DEV & READ CMD
LETTERMAN ARMY INSTITUTE OF RESEARCH	MEDICAL R&D COMMAND	THE SURGEON GENERAL
MATERIALS AND MECHANICS RESEARCH CENTER	--	MAT DEV & READ CMD
MEDICAL BIOENGINEERING R&D LABORATORY	MEDICAL R&D COMMAND	THE SURGEON GENERAL
MEDICAL R&D COMMAND	--	THE SURGEON GENERAL
MEDICAL RESEARCH INSTITUTE OF CHEMICAL DEFENSE	MEDICAL R&D COMMAND	THE SURGEON GENERAL
MEDICAL RESEARCH INST OF INFECTIOUS DISEASES	MISSILE COMMAND	THE SURGEON GENERAL
MISSILE LABORATORY	--	MAT DEV & READ CMD
MOBILITY EQUIPMENT R&D COMMAND	--	MAT DEV & READ CMD
NATICK R&D LABORATORIES	--	MAT DEV & READ CMD
NIGHT VISION & ELECTRO-OPTICS LABORATORY	ELECTRONICS R&D COMMAND	MAT DEV & READ CMD

TABLE 8 - ARMY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

COMMAND CHAIN	
<u>INTERMEDIATE</u>	<u>COMMAND</u>
RES INST FOR BEHAVIORAL & SOCIAL SCIENCES	DEPUTY CHIEF OF STAFF FOR PERSONNEL
RESEARCH INSTITUTE OF ENVIRONMENTAL MEDICINE	THE SURGEON GENERAL
SIGNALS WARFARE LABORATORY	MAT DEV & READ CMD
TANK-AUTOMOTIVE COMMAND LABORATORIES	MAT DEV & READ CMD
WALTER REED ARMY INSTITUTE OF RESEARCH	THE SURGEON GENERAL
MEDICAL R&D COMMAND	
ELECTRONICS R&D CMD	
TANK AUTOMOTIVE COMMAND	
MEDICAL R&D COMMAND	

TABLE 9 - NAVY RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

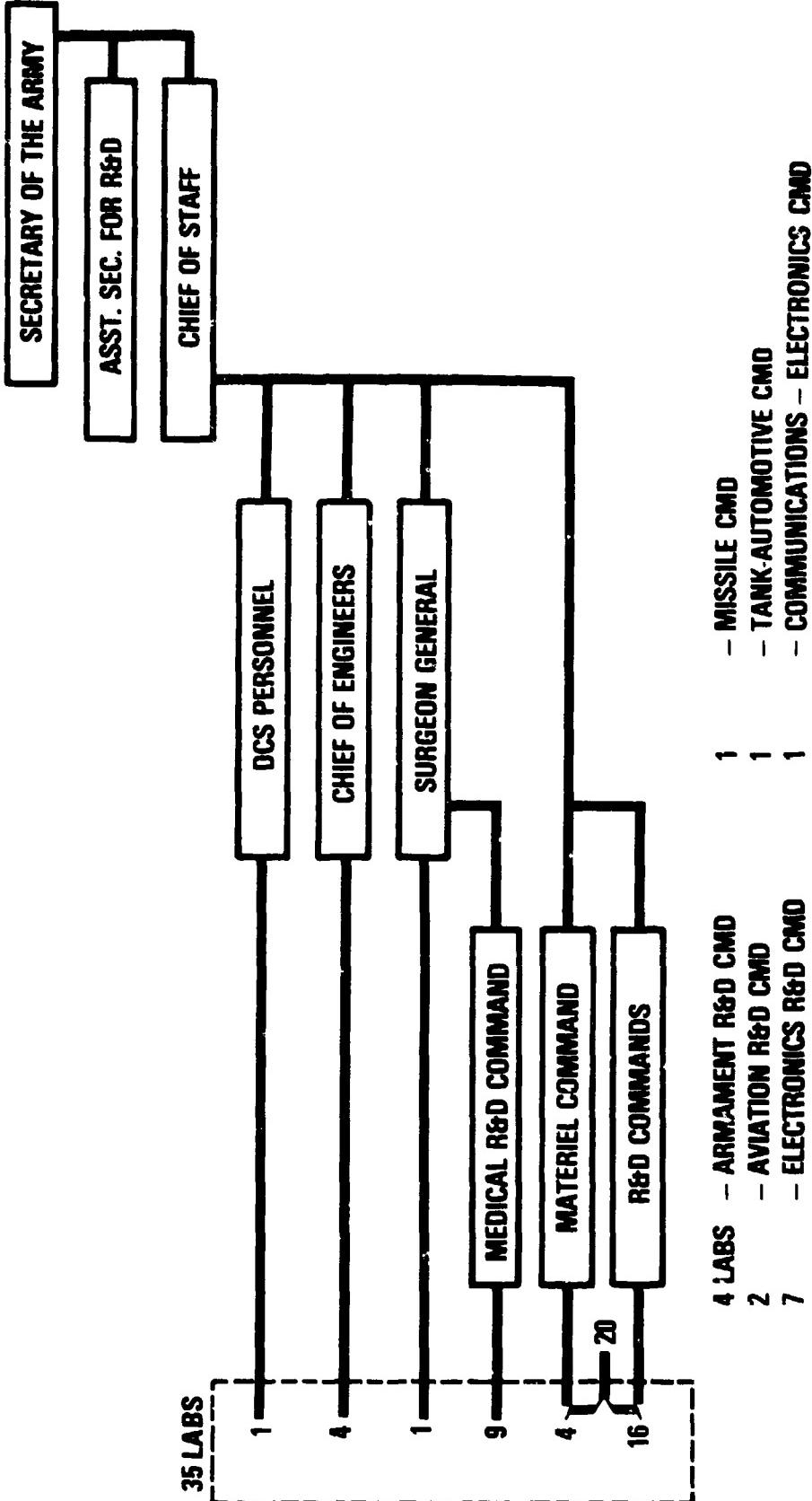
	<u>COMMAND CHAIN</u>	<u>COMMAND</u>
	<u>INTERMEDIATE</u>	
AEROSPACE MEDICAL RESEARCH LABORATORY	MEDICAL R&D COMMAND	CHIEF, BUR OF MED/SUR CHIEF OF NAVAL MATERIAL
AIR DEVELOPMENT CENTER	--	CHIEF OF NAVAL RESEARCH
ARCTIC RESEARCH LABORATORY	MEDICAL R&D COMMAND	CHIEF BUR OF MED/SUR
BIODYNAMICS LABORATORY	--	CHIEF OF NAVAL RESEARCH
BIOSCIENCES LABORATORY	--	CHIEF OF NAVAL RESEARCH
CIVIL ENGINEERING LABORATORY	NAVAL FAC ENG COMMAND	CHIEF OF NAVAL MATERIAL
CLOTHING AND TEXTILE RESEARCH FACILITY	NAVAL SUPPLY SYS COMMAND	CHIEF OF NAVAL MATERIAL
COASTAL SYSTEMS CENTER	--	CHIEF OF NAVAL MATERIAL
DAVID W. TAYLOR SHIP R&D CENTER	MEDICAL R&D COMMAND	CHIEF, BUR OF MED/SUR
DENTAL RESEARCH INSTITUTE, NTC	NAVAL AIR SYSTEMS COMMAND	CHIEF OF NAVAL MATERIAL
ENVIRONMENTAL PREDICTION RESEARCH FACILITY	MEDICAL R&D COMMAND	CHIEF, BUR OF MED/SUR
HEALTH RESEARCH CENTER	MEDICAL R&D COMMAND	CHIEF, BUR OF MED/SUR
MEDICAL RESEARCH INSTITUTE	MEDICAL R&D COMMAND	CHIEF, BUR OF MED/SUR
MEDICAL RESEARCH UNIT NO. 2	MEDICAL R&D COMMAND	CHIEF, BUR OF MED/SUR
MEDICAL RESEARCH UNIT NO. 3	MEDICAL R&D COMMAND	CHIEF OF NAVAL RESEARCH
OCEAN R&D ACTIVITY	--	CHIEF OF NAVAL MATERIAL
OCEAN SYSTEMS CENTER	MEDICAL R&D COMMAND	CHIEF OF NAVAL MATERIAL
PERSONNEL RESEARCH & DEVELOPMENT CENTER	--	CHIEF OF NAVAL MATERIAL
RESEARCH LABORATORY	--	CHIEF OF NAVAL RESEARCH
SUBMARINE MEDICAL RESEARCH LABORATORY	MEDICAL R&D COMMAND	CHIEF, BUR OF MED/SUR
SURFACE WEAPONS CENTER	--	CHIEF OF NAVAL MATERIAL
UNDERSEAS RANGES DEPARTMENT	--	CHIEF OF NAVAL MATERIAL
UNDERWATER SYSTEMS CENTER	--	CHIEF OF NAVAL MATERIAL
WEAPONS CENTER	--	CHIEF OF NAVAL MATERIAL

TABLE 10 AIR FORCE RESEARCH AND DEVELOPMENT LABORATORY ORGANIZATIONAL RELATIONSHIPS

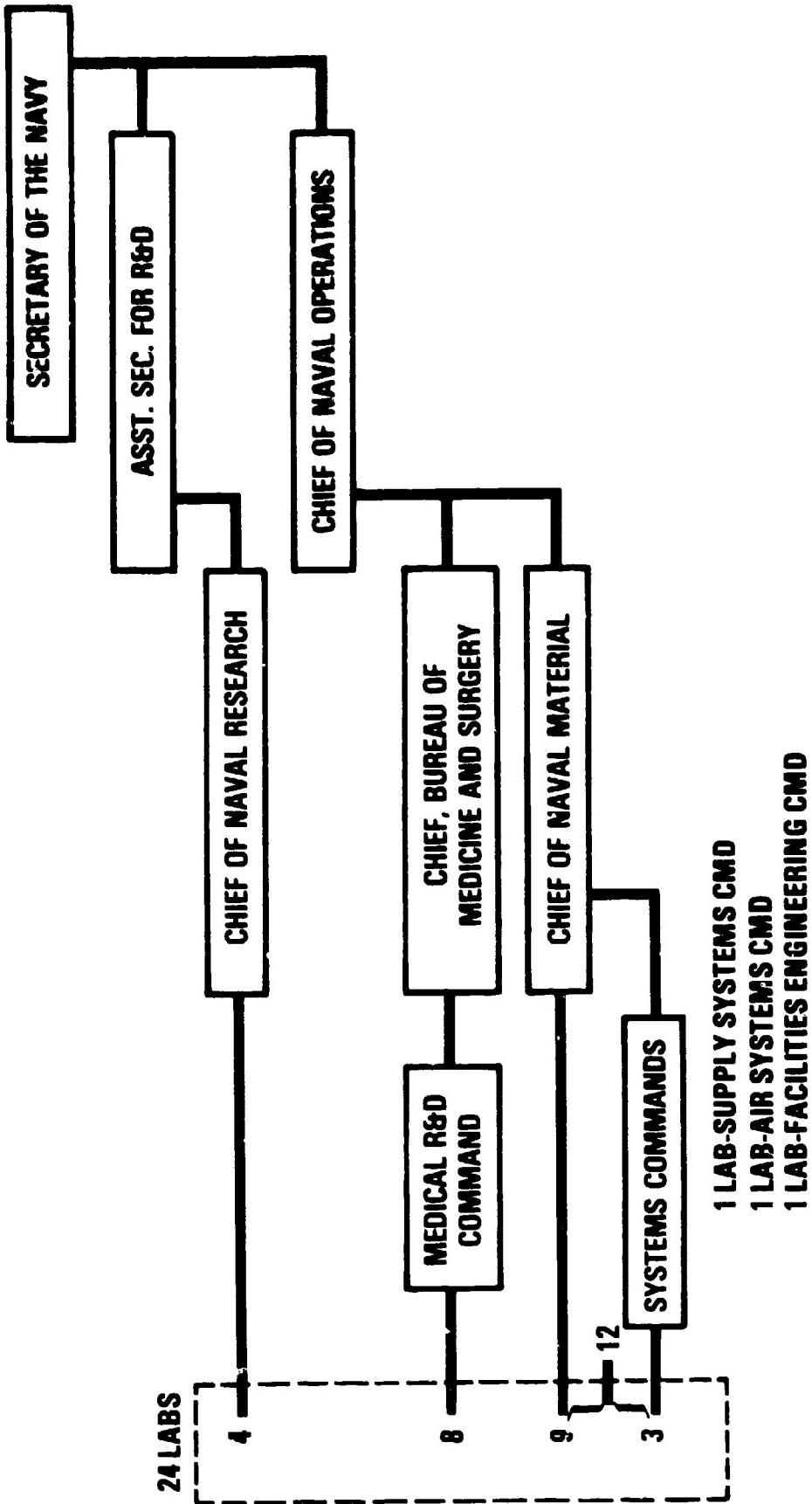
<u>COMMAND CHAIN</u>	<u>COMMAND</u>
<u>INTERMEDIATE</u>	<u>COMMAND</u>
AEROPROPELLION LABORATORY	WRIGHT AERONAUTICAL LABS
AEROSPACE MEDICAL RESEARCH LABORATORY	AF SYSTEMS MEDICAL DIVISION
*ARMAMENT DIVISION	--
AVIONICS LABORATORY	WRIGHT AERONAUTICAL LABS
ENGINEERING SERVICES CENTER/RD	--
FLIGHT DYNAMICS LABORATORY	WRIGHT AERONAUTICAL LABS
FRANK J. SEILER RESEARCH LABORATORY	OFFICE OF SCIENTIFIC RES
GEOPHYSICS LABORATORY	--
HUMAN RESOURCES LABORATORY	--
MATERIALS LABORATORY	WRIGHT AERONAUTICAL LABS
ROCKET PROPULSION LABORATORY	--
ROME AIR DEVELOPMENT CENTER	ELECTRONIC SYSTEMS DIVISION
SCHOOL OF AEROSPACE MEDICINE	AEROSPACE MEDICAL DIVISION
WEAPONS LABORATORY	--

\* Laboratory portion not reported separately in this report (See Armament Division which includes  
Armament Laboratory)

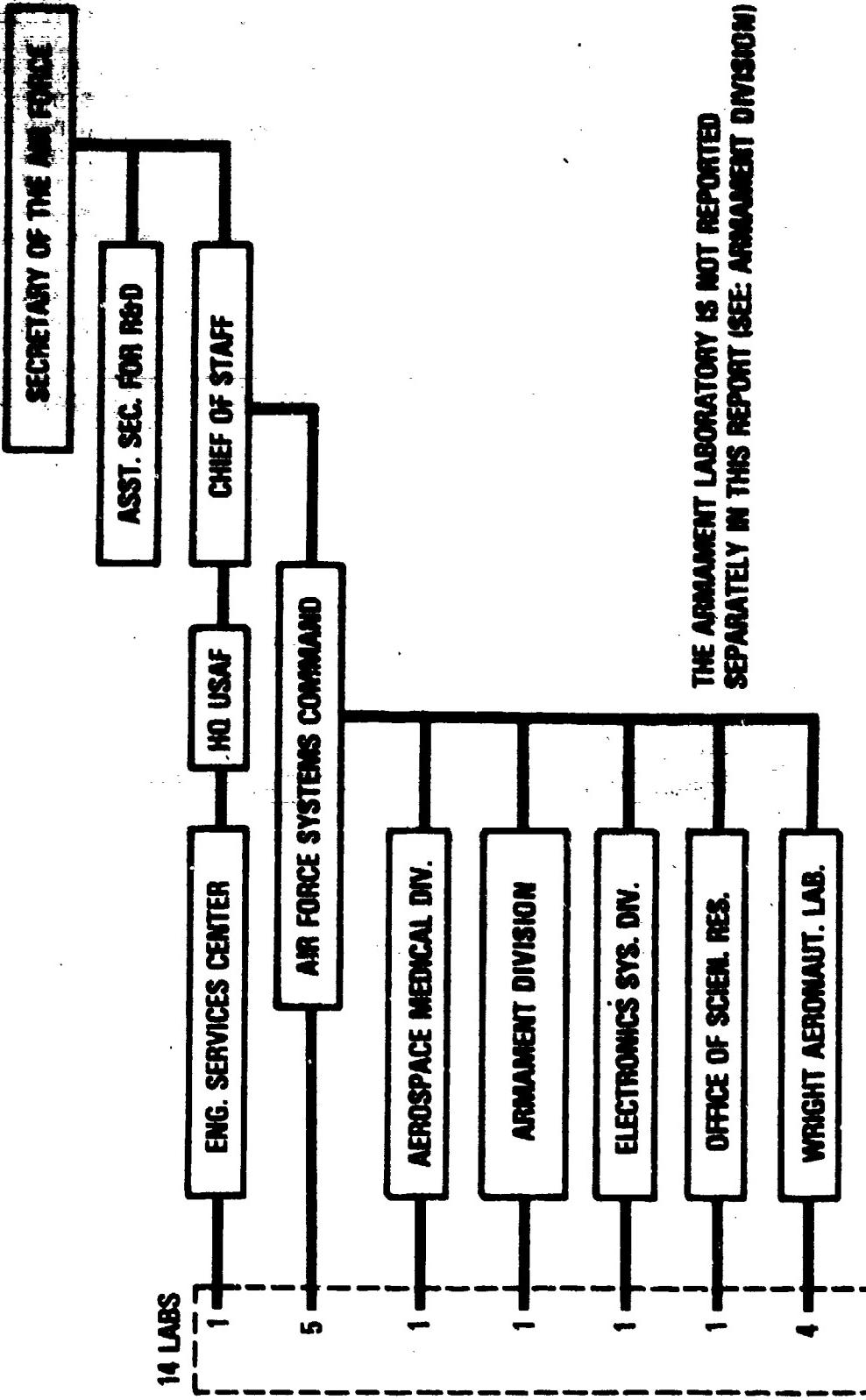
# ARMY LABORATORIES COMMAND CHAIN



# NAVY LABORATORIES COMMAND CHAIN



# AIR FORCE LABORATORIES COMMAND CHAIN



## INSTALLATION: AEROMEDICAL RESEARCH LABORATORY

FT. RUCKER, AL.

CDR. COL. STANLEY C. KNAPP

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	4.281	5.904
TOTAL PROCUREMENT	0.000	0.000
TOTAL OSM	0.116	0.000
TOTAL OTHER	1.578	2.145
TOTAL ANNUAL LAB	5.925	8.049
 TOTAL INHOUSE	 5.870	 7.599
TOTAL INHOUSE RDT&E	8.678	5.454
ANNUAL OPERATING COST	1.708	2.986

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	78	18	40	38
CIVILIAN	75	6	17	58
TOTAL	153	19	57	96

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	52.747	7.797	21.884	82.428	0.844	8.787

## ...MISSION

STANDARDS AND CIRCA 1982 LIFE SUPPORT  
 MAN-RATED VIBRATION FACILITY; HELICOPTER INFLIGHT MONITORING SYS WITH  
 INSTRUMENTED RANGE; ANECHOIC AND REVERBERATION CHAMBERS; MOBILE  
 ACCOUSTICS LAB; EYE MOVEMENT MEASURING LAB.

## ...CURRENT IMPORTANT PROGRAMS

CHEMICAL WARFARE DEFENSE  
 MACHINE VS HUMAN CAPABILITY/SUSTAINABILITY  
 HIGH TECHNOLOGY WEAPON HAZARDS  
 CASUALTY MANAGEMENT ON INTEGRATED BATTLEFIELD

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

INFLIGHT MEDICAL RESEARCH; VIVARIUM; DATA ACQUISITION & BIOTELEMETRY SYS  
 ELECTRON MICROSCOPY LAB; FIELD RSCH FACILITY; HYBRID ANALOGUE/DIGITAL  
 COMPUTER SYS; IMPACT FACILITY; SCIENTIFIC & MEDICAL RSCH INFO CENTER;  
 SPECTROGRAPHIC ANALYSIS SYS; CARDIOPULMONARY LAB  
 CONDUCTS LIFE SCIENCES RSCH INTO AVIATION, COMBAT VEHICLES, AND COMBAT  
 WEAPON SYS ENVIRONMENTS & THEIR EFFECTS ON CREWMEMBERS HEALTH, SAFETY &  
 PERFORMANCE. PROVIDES TO DESIGNERS, DEVELOPERS & USERS OF ARMY SYS, DATA  
 BASES ACQUIRED THRU FIELD & LAB RSCH. ASSISTS OTHER USAMRDC LABS AND  
 INSTITUTES IN RSCH ON THE BIOEFFECTS OF LASER SYS, MEDICAL DEFENSE AGNST  
 CHEMICAL AGENTS, IMPACT OF CONTINUOUS OPNS ON INDIVIDUAL & CREW  
 PERFORMANCE, AND DEVELOPMENT OF IMPROVED MEANS OF PATIENT EVACUATION.

INSTALLATION: AIR DEFENSE BOARD

EL PASO, TX.

PRES. LTC. WALTER M. BURCH

TECH. ADV. MR. CHARLES E. FRENCH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	4.894	5.087
TOTAL PROCUREMENT	0.617	0.625
TOTAL O&M	0.518	0.828
TOTAL OTHER	2.665	2.965
TOTAL ANNUAL LAB	8.689	9.510
TOTAL INHOUSE	7.671	8.788
TOTAL INHOUSE RDT&E	4.858	4.586
ANNUAL OPERATING COST	0.445	0.516

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	112	0	18	96
CIVILIAN	85	0	18	72
TOTAL	197	0	29	168

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	88.154	87.090	20.183	90.427	0.000	12.812

...MISSION

PLAN, CONDUCT AND REPT ON OPERATIONAL AND OTHER USER TESTS. PARTICIPATE IN OTHER TESTING AS DIR. PROV ADVICK AND GUIDN ON TEST MATTERS TO COMBAT TRAINING, AND MAT DEVELOPERS, OTHER SERVICES AND PRIVATE INDUSTRY. CONDUCT OTHER TESTS AND SELECTED SPECIFIC EVAL AS DIR BY CG TRADOC.

...CURRENT IMPORTANT PROGRAMS

DIVAD GUN OT IIA

CHAP FLIR

MILES AGES/AD

CROSSEYE AIRBORNE

AN/ADR-6

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EQUIPMENT: MULTIPLE TGT TRACKING SYS PROVIDES DATA FROM AIR & GROUND TGTS, TWO LASER TRACKING SYS PROVIDE DATA FROM COOPERATIVE TGTS, INSTR RADAR SYS THAT PROVIDES HIGH ACCURACY, ONE NIKE-HERC FIRE CON SYS USED WITH RADAR DATA RECORDER, A RANGE TIMING SYS TO PROVIDE A TIME BASE FOR ALL INSTR SYS, TWO DATA ACQ SYS ACCEPT 59 DIFFERENT SIGNALS, CCTV SYS FOR RANGE SAFETY, TECH PHOTO LAB FOR REQUIRED DATA, RICS PROVIDES NEAR REAL TIME DATA OUTPUTS. FACILITIES AT FT BLISS, BLDG 1656 HOUSES RICS, RANGE TIMING SYS, DATA REDUCTION SYS, ELECTRONICS CAL & FABRICATION LAB, MACHINE & CARPENTER SHOPS, MICROWAVE TERMINAL THAT PROVIDES DATA LINK TO RANGES, PHOTOGRAPHIC LAB, NORTH MCGREGOR RANGES FOR FIRING FORWARD AREA WEAPONS AT AIR OR GROUND TGTS. SITE MONITOR FOR ELECTRONICS TESTING OF EQUIPMENT.

INSTALLATION: AIRBORNE BOARD

FT. BRAGG, N.C.

PRES. COL. WILLIAM R. FOLEY

ENGR. ADV. MR. GEORGE E. GORE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	1.299	1.519
TOTAL PROCUREMENT	0.125	0.173
TOTAL O&M	0.218	1.090
TOTAL OTHER	1.867	2.822
TOTAL ANNUAL LAB	8.509	5.104
TOTAL INHOUSE	8.509	5.104
TOTAL INHOUSE RDT&E	1.299	1.519
ANNUAL OPERATING COST	1.124	1.370

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	110	0	16	94
CIVILIAN	89	0	8	81
TOTAL	149	0	24	125

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
27	8.978	8.914	89.390	47.282	0.970	4.578

...MISSION

THE MISSION OF THE ABN BD IS TO PLAN, CONDUCT AND REPORT ON OT I & II, FDTE AND OTHER USER TYPE TESTS OF AIRBORNE ITEMS; PARTICIPATE IN DT I, II & III AS DIRECTED; PROVIDE ADVICE AND GUIDANCE ON TEST AND EVALUATION MATTERS. CONDUCT SPECIAL TESTS & EVALUATIONS AS DIRECTED.

...CURRENT IMPORTANT PROGRAMS

LOW ALTITUDE PARACHUTE EXTRACTION SYSTEM  
STANDARD AIRDROP OF SELECTED ITEMS OF EQUIPMENT  
EXTERNAL AIR TRANSPORTABILITY  
INTERNAL AIR TRANSPORTABILITY  
LIGHTER THAN AIR CUSHIONED VEHICLE, 80 TON PAYLOAD

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE: MAIN OFC BLDG, ABN HANGAR, INSTRUMENTATION/DESIGN INTERFACING SECTION, COMBINED SHOP & ADP FACILITY. MAJOR EQUIPMENT INCLUDES: LIGHTWEIGHT OPTICAL TRACKING SYSTEM, 25-TON CRANE, 2 20-TON MOBILE CRANES, 5-TON WRECKER, 40,000 LB ACFT LOADER, THREE T-28B ACFT, 1 UH-1H HELICOPTER, VARIOUS TYPES OF STANDARD PARACHUTES, NINE GASOLINE GENERATORS, DIGITAL THEODOLITES, ELECTRONIC DIAGNOSTIC EQUIPMENT, VOLT-METERS, AMMETERS, SPECTRUM ANALYZERS, SOUND & VIBRATION ANALYZERS, TIME MARK GENERATORS, OSCILLOSCOPES, MULTIMETERS, RANDOM NOISE GENERATORS, POWER SUPPLIES, Q METERS, ATTENUATORS, GRAPHIC LEVEL RECORDERS, 16MM CAMERAS, FILM ANALYZERS, PORTABLE VIDEO EQUIPMENT, VAN METER, ANALOG TAPE RECORDER, FREQUENCY COUNTERS, SOUND LEVEL CALIBRATORS, METER CALIBRATORS, MEGOHMMETER.

INSTALLATION: ARMOR AND ENGINEER BOARD

FT. KNOX, KY.

PRES. COL. J. LYNN FLEMING CIV. SCI. ADVISOR MR. WARREN W. WELLS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	8.801	7.118
TOTAL PROCUREMENT	0.816	0.496
TOTAL O&M	0.427	0.200
TOTAL OTHER	4.851	4.800
TOTAL ANNUAL LAB	18.895	12.609
TOTAL INHOUSE	18.895	12.609
TOTAL INHOUSE RDT&E	8.801	7.118
ANNUAL OPERATING COST	0.669	0.777

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	281	0	50	181
CIVILIAN	98	0	27	71
TOTAL	329	0	77	252

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2	63.365	50.454	88.069	201.888	1.455	8.787

...MISSION

PLAN CONDUCT & REPORT: OTI, II, III, FDTE, CEP & OTHER USER TESTS OF AR/ENGR EQ. PARTICIPATE IN SPEC STUDY OF CML EQ. PROVIDE GUIDANCE & ADVICE TO DEVELOPERS, PRODUCERS, OTHER SVCS & PRIVATE INDUSTRY, PLAN, COORDINATE, RPT & MANAGE ACVTP. PROVIDE ADM, LOGISTICS & OPN SUPPORT TO DCD.

...CURRENT IMPORTANT PROGRAMS

COMBAT VEHICLE TECHNOLOGY PROGRAM

M1 TANK DRIVER TRAINER

OFF-ROUTE ANTITANK MINE SYSTEM

RIBBON BRIDGE ERECTION BOAT

INSTITUTIONAL TANK GUNNERY AND MISSILE TRACKING SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

SIMFIRE HIT-KILL INDICATOR; POSITION LOCATION SYS; WIRE GUIDED EVASIVE TGT SYS; TANK VIDEO SYS; GUN CAMERA; RANGE TIMING EQ; MICROWAVE TELEMETRY EQ; SLR CAMERA; 16MM MOTION PICTURE CAMERA W/DATADOORS; THRU-TANK-OPTICS VIDEO DEV GUN ELEVATION DEVICE; AUTOMATIC FILM ANALYZER & DIGITIZER SYS; ROBOTICS EXPERIMENTATION; DATA ANALYSIS & RECORDING SUBSYSTEM; VIDEO I; VIDEO II; AND METEOROLOGICAL INSTRUMENTATION.

INSTALLATION: ARMY RESEARCH OFFICE

DURHAM, N.C.

CDR. COL. DUFF G. MANGES

TECH. DIR. DR. HERMANN R. ROBL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	55.078	69.188
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.100	0.112
TOTAL ANNUAL LAB	55.178	69.245
TOTAL INHOUSE	0.100	0.112
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	1.196	1.880

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	2	0	2	0
CIVILIAN	95	81	81	64
TOTAL	97	81	83	64

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
6	0.000	24.840	0.000	24.840	0.000	0.619	

...MISSION

TO MANAGE THAT PORTION OF THE RSCH PROGRAM RELEVANT TO ARMY MISSIONS IN MATH AND THE PHY, ENGR, ENVIRONMENTAL AND LIFE SCIS ACCOMPLISHED THRU CONTR AND GRANTS WITH EDUC INSTITS, RSCH INSTITS AND GOVT AND INDUS LABS AND TO REP ARMY RSCH INTERESTS OVERSEAS.

...CURRENT IMPORTANT PROGRAMS

ATMOSPHERIC EFFECTS ON TRANSMISSION.

CHEMICAL AND BIOLOGICAL DEFENSE.

JOINT SERVICES ELECTRONICS PROGRAM.

LARGE SCALE SCIENTIFIC COMPUTATION.

NEAR MILLIMETER WAVE SOURCES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ADMINISTRATION OF RESEARCH PROGRAMS IN PHYSICAL SCIENCES

MATHEMATICAL, MATERIAL, ELECTRONICS, MECHANICS AND AERONAUTICS.

ADMINISTRATION OF THE RESEARCH PORTION OF ARMY RESEARCH AND STANDARDIZATION OFFICE, LONDON, COORDINATES ARMY RESEARCH EFFORTS WITHIN THE ARMY AND WITH OTHER GOVERNMENT AGENCIES SUCH AS NAVY, NASA, DOD, DOE, NSF AND OTHERS.

INSTALLATION: ATMOSPHERIC SCIENCES LABORATORY

WHITE SANDS MR, N.M.

CDR. DIR. COL. W. E. RAWLINSON JR

DEP. DIR. DR. HENRY RACHELE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	21.900	19.378
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.089	0.084
TOTAL OTHER	4.756	5.152
TOTAL ANNUAL LAB	26.745	24.564
TOTAL INHOUSE	17.575	17.670
TOTAL INHOUSE RDT&E	12.780	12.484
ANNUAL OPERATING COST	4.889	5.257

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	852	0	1	851
CIVILIAN	175	27	97	78
TOTAL	527	27	98	429

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
15	51.541	26.668	67.658	145.862	2.745	20.759

...MISSION

RESPONSIBLE FOR THAT PORTION OF ERADCOM DEVOTED TO RESEARCH IN ATMOSPHERIC SCIENCES DEVELOPMENT OF METEOROLOGICAL TECHNIQUES AND EQUIPMENT FOR FIELD ARMY FURNISH METEOROLOGICAL SERVICES TO ARMY ROTE ACTIVITIES

...CURRENT IMPORTANT PROGRAMS

AUTOMATIC ATMOSPHERIC SOUNDING SET AN/TMO-81  
ATMOSPHERIC CHARACTERIZATION-BATTLEFIELD OBSCURATION EFFECTS  
REMOTE ATMOSPHERIC SENSING MILLIMETER MICROWAVE PROPAGATION  
ATMOSPHERIC MODELS FOR E-O SYSTEMS ATMOS EFFECTS ON COMMUNICATIONS  
METEOROLOGICAL SUPPORT TO RDTE ACTIVITIES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

METEOROLOGICAL RESEARCH FACILITY AND CAPABILITY  
TRANSPORTABLE ATMOSPHERIC CHARACTERIZATION STATION  
ATMOSPHERIC PHYSICS RESEARCH FACILITY AND CAPABILITY  
UPPER ATMOSPHERE RESEARCH AND SOUNDING ROCKET FACILITY AND CAPABILITY  
ION MASS SPECTROMETER SYSTEM  
REMOTE ATMOSPHERIC SENSING FIELD RESEARCH FACILITY  
ATMOSPHERIC SPECTROSCOPY-LASER PROPAGATION FACILITY  
METEOROLOGICAL RDTE SUPPORT FACILITIES-ALASKA TO CANAL ZONE  
METEOROLOGICAL INSTRUMENTATION TEST MAINTENANCE CALIBRATION FACILITY  
FACILITY FOR SONIC OBSERVATION OF TRAJECTORY AND IMPACT OF MISSILES  
HIGH ENERGY LASER TEST FACILITY.

INSTALLATION: AVIATION BOARD

FT. RUCKER, AL.

PRES. COL. ROBERT A. BONIFACIO

TECH. ADV. GEORGE E. SLAGLEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	8.746	6.897
TOTAL PROCUREMENT	0.711	0.650
TOTAL O&M	6.266	0.721
TOTAL OTHER	1.820	2.075
TOTAL ANNUAL LAB	12.548	9.848
 TOTAL INHOUSE	 12.485	 9.843
TOTAL INHOUSE RDT&E	8.698	6.897
ANNUAL OPERATING COST	1.826	1.988

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	79	0	80	49
CIVILIAN	86	1	8	28
TOTAL	115	1	88	77

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROF	EQUIP
0	0.000	18.681	18.599	82.280	0.000	1.612

...MISSION

TO PLAN, CONDUCT AND REPORT ON OPERATIONAL TEST I, II AND IIA FOR NONMAJ AND OTHER TESTS AS DIRECTED BY HQ TRADOC. AVN BD DESIGNS AND CONDUCTS TESTING AND EVALUATION OF AVIATION SYSTEMS, SUBSYSTEMS AND ANCILLIARY EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

FO257, NIGHT HAWK/NIGHT VISION GOGGLES WEATHER MINIMUMS  
OTN 505, BLACK HAWK FLIGHT SIMULATOR  
OTN 849, OXYGEN SYSTEM FOR HELICOPTERS  
OTN 886, QUADRANT LASER WARNING RECEIVER  
OTN 689, AVIATION NIGHT VISION IMAGING SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NO MAJOR EQUIPMENT OR FACILITY.

INSTALLATION: AVIATION DEVELOPMENT TEST ACTIVITY

FT. RUCKER, AL.

CDR. LTC. (P) WILLIAM B. WOODSON

TECH. DIR. DR. JAMES S. KISHI

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	8.099	10.006
TOTAL PROCUREMENT	1.180	1.446
TOTAL O&M	4.916	5.200
TOTAL OTHER	8.411	8.889
TOTAL ANNUAL LAB	17.556	20.540
 TOTAL INHOUSE	17.556	20.540
TOTAL INHOUSE RDT&E	8.099	10.006
ANNUAL OPERATING COST	6.455	7.848

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL		NON- PROF
			PROF	NON- PROF	
MILITARY	156	0	21		135
CIVILIAN	94	1	22		72
TOTAL	250	1	43		207

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1196	0.000	89.124	112.463	151.587	1.400	28.953

## ...MISSION

PLAN, CONDUCT, EVALUATE & REPORT ON AVN GOVT TEST ELEM(EDT-G, ADVT-G, PQT-G, PVT-G), EXCEPT THOSE PORTIONS PERTAINING TO ACFT PERFORMANCE, STABILITY & CONTROL PROVIDE INPUT, MONITOR & EVALUATE RESULTS OF CONTR TEST ELEMENTS CONDUCT OTHER AVIATION TESTS & EVALUATIONS AS DIRECTED BY CG, TECOM.

## ...CURRENT IMPORTANT PROGRAMS

CH-47C W/T55 L712 ENGINE  
LOGISTICAL EVALUATION TEST OF THE UH-60A BLACK HAWK  
RAM GROWTH/MATURITY OF THE CH-47D  
LASER WARNING RECEIVER (LWR) AN/AVR-2  
HELICOPTER OXYGEN SYSTEM

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

1 U-21, 4 AH-1, 1 T-42, 1 UH-60) AND MAY BE USED AS TEST BEDS FOR ALL COMPONENTS, EQUIPMENT OR SUPPLIES APPLICABLE TO THAT A/C SERIES. A MODULAR ENGINE TEST SYSTEM (METS) PROVIDES ACCURATE MEASUREMENTS OF TURBINE ENGINE PERFORMANCE FOR ENGINES UP TO 5000 HP & WT UP TO 2000 LB. ON-SITE DATA PROCESSING & DISPLAY CAPABILITY EXISTS WITH PDP-11 & IBM 4881 COMPUTER SYS. ADMIN & TECHNICAL PHOTOGRAPHIC CAPABILITY ARE AVAIL TO INCLUDE VIDEO & 16MM INSTRUMENTATION CAMERAS. THE INSTRUMENTATION LAB CAN COLLECT ANALOG & DIGITAL MEASUREMENTS USING 14-TRACK INSTRUMENTATION RECORDERS; HAS B&W & COLOR VIDEO RECORDING CAF, STRIP-CHART RECORDERS, OSCILLOGRAPH RECORDERS & AIRINC 514 AIRLINE TYPE CRASH RECORDERS. AN OVER-WATER RANGE IS AVAIL FOR RELIABILITY TESTING OF A/C WEAPONS SYS.

INSTALLATION: AVIATION ENGINEERING FLIGHT ACTIVITY

EDWARDS AFB, CA.

CDR. COL. LEWIS J. MCCONNELL

TECH. DIR. MR. JAMES S. HAYDEN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	6.288	6.500
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.178	1.290
TOTAL ANNUAL LAB	7.461	7.790
TOTAL INHOUSE	7.461	7.790
TOTAL INHOUSE RDT&E	6.288	6.500
ANNUAL OPERATING COST	1.725	1.895

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	66	0	26	40
CIVILIAN	100	0	85	65
TOTAL	166	0	61	105

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
19	9.200	16.000	124.800	150.000	8.850	12.298

...MISSION

PRODUCE ENGR FLT TEST DATA ON ACFT PERFS, HANDLING QUALITIES, VIBRATION, SYS/SUBSYSTEM INTERFACE FOR USE IN ACFT DEVELOPMENT AND QUALIFICATION. SUSTAIN THE CAPABILITY TO COMPLETELY INSTRUMENT TEST ACFT WITH ONBOARD RECORDING/TELEMETRY REAL TIME DATA REDUCTION. CONDUCT PRE-TPS ORIENT.

...CURRENT IMPORTANT PROGRAMS

YAH-64A EDT A&FC PHASE I

UH-60A A&FC ICING

OV-1 ICING

LCH RAPID DEPLOYMENT MODS

CH-47 CLIMATIC LABORATORY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

JT-28B 2T-28 OV-1C JOV-1C JU-21A JAH-1S 2CH-47C JOH-58C 5JUH-1H

ACFT MAINT CAPABILITY

ACFT MODIFICATION CAPABILITY

ACFT INSTRUMENTATION CAPABILITY

8AIRBORNE DATA AQUISITION-SYSTEMS

IEMR COMPUTER WITH TELEMETRY

8REMOTE GROUND STATIONS WITH COMPUTER AND TELEMETRY CAPABILITY

1MILIKEN CAMERA

1MAG TAPE COMPOSER 3MAG TAPE TYPEWRITERS 2MAG TYPEWRITERS 8MAG COMPOSERS

## INSTALLATION: AVIATION RESEARCH &amp; TECHNOLOGY LABORATORIES MOFFETT FIELD, CA.

DIR. DR. RICHARD M. CARLSON DEP. DIR. COL. WALTER URBACK JR

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	54.204	80.287
TOTAL PROCUREMENT	4.000	6.052
TOTAL Q&M	0.612	0.035
TOTAL OTHER	0.811	1.102
TOTAL ANNUAL LAB	59.627	87.476
 TOTAL INHOUSE	22.064	22.414
TOTAL INHOUSE RDT&E	20.882	20.798
ANNUAL OPERATING COST	6.181	6.679

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	20	1	18	7
CIVILIAN	868	88	246	117
TOTAL	883	84	259	124

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
127	88.848	58.678	16.870	163.391	2.272	18.124

## ...MISSION

MANAGE AND EXECUTE RESEARCH AND DEVELOPMENT OF ARMY AIRMOBILE SYSTEMS. PROVIDE TECHNICAL SUPPORT TO PROJECT/PRODUCT MANAGERS AND SYSTEM DEVELOPERS AS REQUIRED. PROVIDE INDEPENDENT TECHNICAL RISK ASSESSMENT TO COMMANDER USAAVRADCOM AND HIGHER AUTHORITY.

## ...CURRENT IMPORTANT PROGRAMS

RSCH IN FUNDAMENTAL ROTOR/ROTORCRAFT AERODYNAMICS, DYNAMICS, AND NOISE. RESEARCH AND DEVELOPMENT OF SMALL GAS TURBINES. R&D TO IMPROVE RELIABILITY & MAINTAINABILITY OF AIRMOBILE SYSTEMS. RSCH COMPOSITES & EVALUATE APPLICATIONS TO IMPROVE STRUCTURES FOR A/C. EVOLVE TECHNOLOGY & CRITERIA TO IMPROVE FLIGHT SAFETY & SURVIVABILITY.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

THREE LABORATORIES AT MOFFETT FIELD CA, CLEVELAND OH, HAMPTON VA, COLLOCATED WITH NASA, PARTICIPATING IN RESEARCH OF AIRMOBILE SYSTEMS AND DISCIPLINES, JOINTLY USING WIND TUNNELS, SIMULATORS AND LABORATORY TEST FACILITIES, INCLUDING SHOPS, FLIGHT LINE AND HANGAR, STRUCTURE LAB, ENGINE TEST FACILITIES AND COMPUTATIONAL EQUIPMENT. FOURTH LABORATORY AT FORT EUSTIS VA, PERFORMING ADVANCED APPLICATIONS WORK INCLUDING AIRCRAFT WEAPONIZATION AND MISSION SUPPORT EQUIPMENT. MAJOR EQUIPMENT AND FACILITIES ARE FILAMENT WINDING MACHINES, TENSILE TESTERS, VIBRATION TESTER, SMALL BALLISTIC RANGE, CALIBRATION LAB, ENVIRONMENT CHAMBER, ATOMIC ABSORPTION SPECTROMETER, TELEMETRIC GROUND STATION, NON-DESTRUCT TESTING FACILITY, AND FLIGHT SAFETY LAB.

## INSTALLATION: AVIONICS R &amp; D ACTIVITY

FT. MONMOUTH, N.J.

CDR. COL. DARROLD D. GARRISON

DEP. DIR. MR. T. SUETA

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	14.298	24.496
TOTAL PROCUREMENT	7.489	12.991
TOTAL O&M	8.018	2.446
TOTAL OTHER	1.460	0.846
TOTAL ANNUAL LAB	26.210	40.279
 TOTAL INHOUSE	 15.021	 14.985
TOTAL INHOUSE RDT&E	6.275	7.908
ANNUAL OPERATING COST	8.878	4.088

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PKDS	TOTAL PROF	NON-
				PROF
MILITARY	18	0	9	9
CIVILIAN	264	4	161	103
TOTAL	282	4	170	112

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLION \$)					
		LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	16.000	83.500	0.000	49.500	49.500	0.000	7.400

## ...MISSION

RESPONSIBLE FOR THAT PORTION OF AYRADCOMS MISSION WHICH PERTAINS TO AVIONICS FROM RESEARCH THRU FIRST TIME PRODUCTION. THIS ENCOMPASSES AIRBORNE AND GROUND EQUIPMENT FOR COMMUNICATIONS, NAVIGATIONS, AIR TRAFFIC MGT, ENVIRONMENT SENSING, LANDING AND INSTRUMENTATION.

## ...CURRENT IMPORTANT PROGRAMS

ARMY DIGITAL AVIONICS SYSTEM  
INTEGRATED INERTIAL NAVIGATION SYSTEM  
ADVANCED DIGITAL COMMUNICATIONS  
AIRBORNE TARGET HANDOFF SYSTEM

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT INCLUDES NIGHT NAVIGATION PILOTAGE SYSTEM, DIGITAL HOT BENCH, SYMBOL GENERATOR, WIRE DETECTION AND RECOGNITION SIMULATOR, A DIGITAL MULTI LEGEND DISPLAY SWITCH, MICROPROCESSOR INTERFACE UNIT, LARGE SCALE COMPUTER DYNAMIC SIMULATION OF GLOBAL POSITIONING SYSTEM/DOPPLER VELOCITY SENSOR HYBRID NAVIGATION SYSTEM, AND AUDIO/DIGITAL ANALYZERS. FACILITIES INCLUDE ACOUSTIC/AUDIO ANALYSIS FACILITY, TACTICAL AVIONICS SYSTEM SIMULATOR(TASS), SYSTEM TEST BED FOR AVIONICS RESEARCH (STAR), AIR TRAFFIC CONTROL FACILITY, ADJACENT HELIPORT

## INSTALLATION: BALLISTIC RESEARCH LABORATORY

ABERDEEN PROV. GR., MD

DIR. DR. ROBERT J. EICHELBERGER

DEP. DIR. COL. ROBERT N. MATHIS

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	46.961	51.480
TOTAL PROCUREMENT	0.287	0.210
TOTAL O&M	1.158	1.020
TOTAL OTHER	8.988	2.200
TOTAL ANNUAL LAB	52.889	54.910
 TOTAL INHOUSE	48.094	42.500
TOTAL INHOUSE RDT&E	87.774	89.200
ANNUAL OPERATING COST	12.879	12.500

PERSONNEL	AUTHORIZED STRENGTH	PERSONNEL DATA (END OF FY 1981)		NON- PROF
		TOTAL PHDS	TOTAL PROF	
MILITARY	81	1	10	21
CIVILIAN	717	107	417	800
TOTAL	748	108	427	821

ACRES	SPACE AND PROPERTY				COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1920	611.780	11.200	40.982	568.962		13.870	39.807

## ...MISSION

CONDUCT RESEARCH AND EXPL DEV IN SCIENCES/TECHNOLOGIES NECESSARY FOR CONCEIVING, DESIGNING, DEVELOPING AND EVALUATING WEAPON SYSTEMS, PURSUE ORIENTED FUND RESEARCH IN PHYS, CHEM, MATH, ENGINEERING SUBJECTS, INVESTIGATE PERTINENT BRANCHES OF MILITARY SCIENCES AND TECHNOLOGIES.

## ...CURRENT IMPORTANT PROGRAMS

PROPULSION DYNAMICS OF HYPERVELOCITY AND CONVENTIONAL GUNS, EFFECTS OF CONVENT/NUC WARHEADS, BALLISTIC PROTECT, KE PENETRATORS, WAR HEAD MECHANICS, PENETRATION, FRAGMENTATION, EXPLOSIVE/METAL INTERACTION, FLIGHT DYNAM OF PROJ AND MISSILES, ALL LAND BASED WPNS FIRING TABLES, VULNERABILITY ANALYSIS/VULNERABILITY REDUCTION THREAT/US MATERIEL.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

EXPLOSIVE BLAST CHAMBERS, AERODYNAMIC RANGES, HIGH ALTITUDE BLAST SPHERE, SHOCK TUBES TO SIMULATE NUCLEAR BLAST, MEASURE CHEMICAL REACTION RATES, SOFT RECOVERY SYSTEM FOR ARTILLERY SHELLS, HI SPEED MOTION PHOTOGRAPHY, SPARK PHOTOGRAPHY RANGES, X-RAY CINERADIOGRAPHY, FLASH HOLOGRAPH IC SYST, FIELD TEST FACILITIES FOR PROJECTILE, EXPLOSIVE, AND ARMOR RSCH TESTS, ANALOG COMPUTER FOR SIMULATION OF KINEMATICS OF GUNS AND RIFLES, CENTRAL SITE COMPUTATIONAL FACILITY WITH 108 REMOTE INTERACTIVE TERMINALS, 118 REMOTE BATCH TERMINALS, AN ENVIRONMENTALLY SECURE FULL SCALE TANK GUN TEST FACILITY, PULSED FLOW CHEMICAL REACTOR SYSTEM, ION BEAM ACCELERATOR.

## INSTALLATION: CHEMICAL SYSTEMS LABORATORY

ABERDEEN PROV. GR., M

CDR. DIR. COL. E. C. WEEKEL

ASSOC. DIR. DR. T. J. WELCH

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	59.152	106.056
TOTAL PROCUREMENT	10.000	28.000
TOTAL Q&M	5.557	6.000
TOTAL OTHER	1.425	1.760
TOTAL ANNUAL LAB	76.184	141.816
 TOTAL INHOUSE	 44.762	 67.400
TOTAL INHOUSE RDT&E	32.780	47.640
ANNUAL OPERATING COST	9.888	10.679

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	80	1	19	61
CIVILIAN	787	89	386	401
TOTAL	867	40	405	462

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
		LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1750	861.865	14.184	310.727	680.276		14.619	28.088

## ...MISSION

CSL IS THE ARMY'S CENTER FOR CML RSCH & DEV PROVIDING A DETERRENT AND RETALIATORY CAPABILITY AGAINST CML ATTACK & PROTECTION AGAINST CML/BIO ATTACK. PLAN & CONDUCT WOUND BALLISTIC RSCH INVEST SHOCK TRAUMA, EVAL CP CLOTH/EQUIP; PLAN & CONDUCT RSCH, EXP, DEV OBSCURING SMOKE/AEROSOL SYSTEMS

## ...CURRENT IMPORTANT PROGRAMS

CHEMICAL BIOLOGICAL PROTECTIVE MASK, XM80  
 CHEMICAL BIOLOGICAL DETECTION & WARNING MATERIEL  
 CHEMICAL DECONTAMINATION & CONTAMINATION AVOIDANCE  
 SMOKE OBSCURANTS & SMOKE TOXICOLOGY  
 LETHAL CHEMICAL WEAPONS DEVELOPMENT

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

BASIC RESEARCH; SMOKE/OBSCURANTS; SMOKE TOXICOLOGY; DECONTAMINATION & CONTAMINATION AVOIDANCE; TRAINING AGENTS; ALARM TECH; CML PROTECTION; CML/BIO THREAT ASSESS; CML TECHNOLOGY & TOXICOLOGICAL EFFECTS OF THREAT AGTS; ASSESS FOREIGN BIO; DETECT & IDENT; BIO DETECT; LETHAL & INCAP CA/WEAPONS; CIVIL DIST; BIORRESPONSE TO TRAUMA; CML SYS & PROCEDURES MAJOR EQUIP IS CONTAINED IN A COMPLEX OF ENGR/LAB AREAS, INCLUDES CML PILOT PLANTS, AEROSOL CHAMBER, MUNITIONS FILLING FACILITY, PRODUCTION & FACILITY DESIGN, CHAMBER FOR STUDIES ON SPEECH TRANSMISSION, SIMULANT AGENT CHALLENGE TEST CHAMBER, RUBBER/ELASTOMER MOLD FACILITY. SPECIALIZED CHEMICAL AGENT LAB, PYROTECHNIC MIXING, LOADING, HANDLING FACILITY, COMPUTER MAN, INDOOR BALLISTIC RANGE, SUBSONIC-SUPersonic, TRANSONIC WIND TUNNEL.

## INSTALLATION: COLD REGIONS R&amp;E LABORATORY

HANOVER, N.H.

CDR. COL. W. A. HANSON

ACT. TECH. DIR. DR. K. F. STERRETT

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981		1982
	(ACTUAL)	(ACT + EST)	
TOTAL RDT&E	7.594		9.720
TOTAL PROCUREMENT	0.000		0.000
TOTAL O&M	0.893		0.405
TOTAL OTHER	7.034		7.829
TOTAL ANNUAL LAB	16.176		17.464
 TOTAL INHOUSE	12.698		18.395
TOTAL INHOUSE RDT&E	5.240		6.714
ANNUAL OPERATING COST	8.181		8.182

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		TOTAL PROF	NON- PROF
		PHDS			
MILITARY	14	0		12	2
CIVILIAN	289	88		125	164
TOTAL	808	88		187	166

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
29	80.787	80.027	128.544	289.858	8.359	8.642	

## ...MISSION

COLD REGIONS RESEARCH & ENGINEERING LABORATORY CONDUCTS AND COORDINATES RESEARCH APPLICABLE TO THE ARMY'S NEEDS WHERE WINTER WEATHER AND COLD REPRESENT A SEVERE PROBLEM. MANAGE ARMY COLD REGIONS INFORMATION CENTER.

## ...CURRENT IMPORTANT PROGRAMS

## WINTER COMBAT OPERATIONS TECHNOLOGY

IMPACT OF WINTER ENVIRONMENT ON NEW WEAPON SYSTEMS AND OTHER MATERIEL FACILITIES CONST., OPERATION, & REPAIR IN TEMP & ARCTIC COLD CONDITIONS CONTROL OF ICE ON STRUCTURES. EQUIPMENT AND IN NAVIGATION

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE MAIN LABORATORY AT USACRREL CONTAINS 24 COLD LABS WHICH CAN BE OPERATED TO -58 F, SPECIAL TESTING APPARATUS FOR FROZEN MATERIALS, AN ICE ENGINEERING FACILITY FOR LARGE MODELING EXPERIMENTS WITH ICE, A CHEMISTRY LAB, AN ELECTRON MICROSCOPE LAB, A SOILS PROCESSING LAB, A PAVEMENT TEST FACILITY FOR TESTING UNDER FREEZING/THAWING CONDITIONS, A WASTEWATER TREATMENT RESEARCH FACILITY, A COMPUTER FACILITY, A MASS SPECTROMETER, A GAS CHROMATOGRAPH, AND A SMALL LASER FACILITY. THE ALASKA PROJECTS OFFICE AT FAIRBANKS CONDUCTS RESEARCH AND PROVIDES LOGISTICS SUPPORT FOR OTHER RESEARCH. USACRREL'S MILITARY AND CIVILIAN PERSONNEL HAVE EXPERTISE COVERING A WIDE RANGE OF SCIENTIFIC AND ENGINEERING DISCIPLINES RELATED TO COLD REGIONS RESEARCH. NEW FACILITIES SCHEDULED FOR CONSTRUCTION INCLUDE A FROST EFFECTS RESEARCH FACILITY.

INSTALLATION: COLD REGIONS TEST CENTER

APO SEATTLE, WA.

CDR. COL. JAMES F. HENRIONNET

TECH. ADV. WILLIAM J. HASLEM

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	5.812	6.068
TOTAL PROCUREMENT	0.074	0.000
TOTAL O&M	0.007	0.028
TOTAL OTHER	4.289	5.112
TOTAL ANNUAL LAB	9.632	11.208
 TOTAL INHOUSE	 9.632	 11.203
TOTAL INHOUSE RDT&E	5.812	6.068
ANNUAL OPERATING COST	4.644	5.260

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	268	1	42	221
CIVILIAN	22	1	10	12
TOTAL	285	2	52	288

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTIER	TOTAL	REAL PROP	EQUIP
647155	0.000	7.200	269.719	266.919	10.336	8.983

...MISSION

PLAN, CONDUCT, AND REPORT THE RESULTS OF COLD REGIONS, MOUNTAIN AND NORTHERN ENVIRONMENTAL PHASES OF DEVELOPMENT AND OTHER TESTS; REVIEW PLANS AND MONITOR DEVELOPMENT TESTING IAW INTEGRATED TESTING CYCLE POLICIES. PROVIDE ADVICE AND GUIDANCE TO GOVT AGENCIES AND PRIVATE IND.

...CURRENT IMPORTANT PROGRAMS

DT II PROJECTILE 155 SMOKE WP XM 825

DT II XM 30 PROTECTIVE MASK

DT II XM 19 BIOLOGICAL AGENT ALARM AND XM2 SAMPLER

EDT COMPONENTS OF ARCTIC FUEL SYSTEM SUPPLY POINT

IME/TFT XM17 NORWEGIEN LIGHTWEIGHT DECONTAMINATION SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITY CAN ACCOMODATE A WIDE VARIETY AND LARGE NO OF TESTS AT ANY ONE TIME. SEVERAL VEH TEST COURSES AND EXTENSIVE CROSS COUNTRY TERRAIN RANGES ARE AVAILABLE. 500,000 ACRE ISOLATED IMPACT AREA, 50KM MAX UNOBSEVED RANGE. LARGE RESTRICTED AIRSPACE WITH UNRESTRICTED FIRING TO 10,000 FT ORDNATE. COORD WITH FAA CAN EFFECT UNRESTRICTED ORDNATE. 1ST, 2ND, OR 3RD ORDER SURVEY POINTS. GOOD SECONDARY ROADS. PHONE/NON-TAC RADIO AT ALL RANGES AND TEST SITES. AUTODIN, FACSIMILE, TELETYPE, PHOTO LAB AND MAINT FOR MAJORITY OF EQUIP INCL ACFT, DS/GS CALIBRATION, LIMITED ENGR SUPPORT. ARMY AVN AND USAF ACFT CAN BE ARRANGED. METEROLOGICAL SPT AVAIL. INST FOR MOST ITEMS AVAIL, CAN OBTAIN OTHER INSTRUMENTS. MOVING TARGET SYSTEM, EOD, STATISTICAL, AND MAINT EVAL CAPABILITIES AVAIL. COMPUTER FACILITY AVAIL.

INSTALLATION: COMBAT SURVEILLANCE & TGT ACQUISITION LAB FT. MONMOUTH, N.J.

CDR/DIR. MR. JOHN P. SCHOENING (A) DEPTY DIR. MR. WILLIAM FISHBEIN (A)

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	28.997	31.881
TOTAL PROCUREMENT	82.971	41.728
TOTAL Q&M	8.100	8.070
TOTAL OTHER	0.220	0.228
TOTAL ANNUAL LAB	60.288	76.917
 TOTAL INHOUSE	 6.110	 6.698
TOTAL INHOUSE RDT&E	8.500	3.700
ANNUAL OPERATING COST	4.619	4.309

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	12	0	18	1
CIVILIAN	158	2	92	66
TOTAL	170	2	105	67

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
35	52.324	6.189	10.589	69.052	0.680	7.400

...MISSION

CONDUCT ALL PHASES OF R&D IN THE SCIENCES &  
ASSOCIATED TECH - IDENT FRIEND FOE NEUTRAL.  
NUCLEAR RADIATION DETECTION & MEASUREMENT RADAR ACOUSTIC  
WEAPONS LOCATION REMOTE SENSING AND IMAGERY INTERPRETATION

...CURRENT IMPORTANT PROGRAMS

PROCUREMENT OF MOBILE GROUND IMAGERY INTERPRETATION CENTER.  
ADV DEV OF BATTLEFIELD IDENT FRIEND OR FOE.  
DEV OF ADV GROUND SURV & TARGET ACQ RADAR SYSTEM.  
ADY DEV & INITIAL PROD OF VARIOUS NUCLEAR RAD DETECT & MEASURE EQUIP  
EXPL DEV OF VARIOUS CS&TA SENSORS & SYSTEMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RADAR TECHNIQUES DEVELOPMENT FACILITIES INCL MICROWAVE DARKROOM ATTEN-  
NA PATTERN & TEST RANGE. 65-FT RADAR TEST PLATFORM. OUTDOOR & INDOOR  
RANGES INSTRUMENTED FROM 30 MHZ TO GHZ. MOBILE SPECTRAL & TIME DIS-  
TRIBUTION MEASUREMENT FACILITIES. RADAR INSTRUMENTATION FACILITY CAPABLE  
OF CRACKING X-BAND RADAR & COLLECTING & RECORDING POSITIONS VELOCITY  
AND SIGNAL STRENGTH INCLUDING A SHORT RANGE SEARCH CAPABILITY  
DATA INFORMATION INVESTIGATION. STUDIES AIMED AT BANDWIDTH  
REDUCTION AJ TECHNIQUES INFORMATION PROCESSING, DIGITAL FRAME STORAGE  
MEMORY CIRCUITS AND MULTI-ELEMENT, MULTI-FUNCTIONS MULTI-BEAM ANTENNA  
SYSTEMS. RADIOLOGICAL ASSISTANCE TEAM EXPERIENCED IN FUNCTIONING NEAR  
NUC DETONATIONS, FALLOUT FIELDS, & RADIATION ACCIDENTS. ALPHA, BETA, &  
GAMMA DOSIMETERS.

INSTALLATION: COMMUNICATIONS - ELECTRONICS BOARD

FT. GORDON, GA.

PRES. COL. EDWIN W. CHANDLER

ENGR. ADV. MR. RONNIE E. BRACKETT

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	1.554	2.661
TOTAL PROCUREMENT	0.154	0.158
TOTAL O&M	0.075	0.741
TOTAL OTHER	1.760	1.841
TOTAL ANNUAL LAB	8.548	5.401
 TOTAL INHOUSE	 8.548	 5.401
TOTAL INHOUSE RDT&E	1.554	2.661
ANNUAL OPERATING COST	0.874	1.026

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	59	0	40	19
CIVILIAN	81	0	11	20
TOTAL	90	0	51	39

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
7	0.000	20.950	0.498	21.448	0.127	0.814	

...MISSION

PLANS, CONDUCTS AND REPORTS ON OPERATIONAL TESTS OF I, II, AND III OF C-E SYSTEMS AND FORCE DEVELOPMENT TESTING AND EXPERIMENTATION AS PUBLISHED IN THE DA FIVE YEAR TEST PROGRAM. CONDUCTS CONCEPT EVALUATION PLANS AND OTHER USER-RELATED/CUSTOMER TEST DIRECTED BY TRADOC

...CURRENT IMPORTANT PROGRAMS

INFANTRY DIVISIONS COMMUNICATIONS

ARMY DATA DISTRIBUTION SYSTEM/PACKET RADIO EXPERIMENT

STEERABLE NULL ANTENNA PROCESSOR

SPECIAL FORCES BURST COMM SYS

AUTOMATIC TEST SPT EQUIP FACILITY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MANUAL AND AUTOMATED STIMULUS AND MEASUREMENT EQUIPMENT THAT PROVIDES DATA COLLECTION AND ANALYSIS CAPABILITY OF COMMUNICATIONS-ELECTRONICS CIRCUITS, EQUIPMENT, AND SYSTEMS.

INSTALLATION: COMMUNICATIONS - ELECTRONICS R & D CENTER FT MONMOUTH, N.J.

CDR. MG DONALD M. BABERS

TECH. DIR. MR. THEODORE PHEIFFER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (F + EST)
TOTAL RDT&E	64.655	83.184
TOTAL PROCUREMENT	1.702	19.874
TOTAL O&M	1.892	8.713
TOTAL OTHER	2.322	1.888
TOTAL ANNUAL LAB	70.571	103.154
 TOTAL INHOUSE	 19.820	 16.860
TOTAL INHOUSE RDT&E	17.582	18.790
ANNUAL OPERATING COST	4.452	4.816

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	69	0	22	47
CIVILIAN	557	16	281	276
TOTAL	626	16	303	323

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	81.334	84.717	0.000	116.251	0.000	11.500

...MISSION

CONDUCT R&D RELATED TO COMM EQUIP & SYSTEMS, INCL RADIO, TELEPHONIC, FACSIMILE & DATA COMM/COMSEC. CONDUCT TECH BASE R&D PROG IN TACT ADP SYSTEMS & COMPT SCT. DEV TACT ADP HARDWARE, SOFTWARE, AND LIFE CYCLE SOFTWARE SUPPORT. MANAGE C8 ARMY INTEROP SYS ENGR.

...CURRENT IMPORTANT PROGRAMS

MILITARY COMPUTER FAMILY(MCF), MCF PERIPHERALS & ADA LANGUAGE SYS PROG  
MM WAVE FAMILY OF RADIOS  
DIGITAL GROUP MULTIPLEXER  
FIBER OPTICS  
ARMY C8 AND INTEROPERABILITY SYSTEM ENGINEERING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT R&D RELATING TO MICROWAVE & MILLIMETER RADIO SYS, FIBER-OPTICS, DIGITAL DISTR SYS TACT ANT SYS, SWITCHING & TERMINAL DEVICES. TELEPROCESSING DESIGN CEN IS LAB EXPERIMENTAL FAC THAT SUPPORTS EXPERIMENTS WHICH ALLOW OPTIMUM DEVELOPMENT & VALIDATION OF ARMY & JOINT BATTALION SYS. TDC HAS DEVELOPED EMULATIONS OF THE AN/UYK-12 & AN/UYK-19 ALLOW POST DPL SPI CENTERS & SYSTEMS TO BE SUPPORTED & TO COMMUNICATE IN A SECURE HIGH SPEED MANNER. CONDUCT SOFTWARE SUPPORT OF COMMUNICATIONS SYSTEMS.

## INSTALLATION: CONSTRUCTION ENGINEERING RESEARCH LAB

CHAMPAIGN, IL.

CDR. DIR. COL. L. J. CICERO JR

TECH. DIR. DR. L. R. SHAFFER

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	15.228	16.746
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	4.800	4.780
TOTAL OTHER	8.209	8.530
TOTAL ANNUAL LAB	22.782	25.006
 TOTAL INHOUSE	11.491	12.641
TOTAL INHOUSE RDT&E	8.095	8.905
ANNUAL OPERATING COST	2.794	8.074

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	3	1	3	5
CIVILIAN	204	82	128	76
TOTAL	207	83	186	81

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
30	56.785	84.750	20.019	111.554	6.500	4.652

## ...MISSION

PLAN AND EXECUTE RESEARCH TO OBTAIN THE BEST COMBINATION OF ENGINEERING, DESIGN, CONSTRUCTION, OPERATIONS AND MAINTENANCE TO PROVIDE FACILITIES FOR THE MILITARY ESTABLISHMENT AND OTHER AGENCIES AT LEAST COST AND TO DISSEMINATE THE RESEARCH RESULTS.

## ...CURRENT IMPORTANT PROGRAMS

DEV ENERGY CONS TECH/PROC FOR MIL INSTS  
 DEV COMPUTER AIDED SYSTEMS FOR PLANNING AND DESIGN  
 DEV IMPROVED SYSTEMS FOR RPMA OF MIL FACILITIES  
 DEV MGMT INFO SYS FOR MX PROGRAM  
 DEV SYSTEMS FOR ENVIRONMENTAL QUALITY MGMT

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONTROLLED ENVIRONMENT CHAMBERS; 1000000 POUND CLOSED-LOOP MATERIAL TEST SYSTEM; SCANNING ELECTRON MICROSCOPE; SEMI-AUTOMATIC WELDING EQUIPMENT; BIAXIAL SHOCK TEST MACHINE; NON-DESTRUCTIVE TESTING FACILITY; VACUUM INDUCTION FURNACES; METALLOGRAPHIC SAMPLE PREP; METALLOGRAPH X-RAY DIFFRACTION AND VACUUM SPECTROSCOPY SYSTEM; DYNAMIC TENSION ANALYSIS SYSTEM; DIGITAL RECORDING ANALYSIS EQMT; AND HVAC TEST FACILITY. CAPABILITIES INCLUDE SYSTEMS BUILDING METHODS AND TECHNIQUES; COMPUTER BASED DESIGN AND CONSTRUCTION MGMT TECHNIQUES; ENERGY SYSTEMS DESIGN; CONSERVATION AND ALTERNATE FUELS STRATEGIES; HARDENED FACILITIES ANALYSIS; ENVIRONMENTAL QUALITY MGMT; POLLUTION CONTROL ABATEMENT; MILITARY HOUSING SYSTEMS; UTILITIES SYSTEMS ANALYSIS AND EVALUATION; QUALITY OF LIFE AND ARCHITECTURAL RESEARCH; AND ELECTROMAGNETIC PULSE/INTERFERENCE RESEARCH.

## INSTALLATION: DUGWAY PROVING GROUND

DUGWAY, UT.

CDR. COL. GEORGE A. CARRUTH      SCI. DIR. DR. LOTHAR L. SOLOMON

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	30.026	40.644
TOTAL PROCUREMENT	0.118	0.170
TOTAL O&M	1.381	1.349
TOTAL OTHER	3.855	4.140
TOTAL ANNUAL LAB	85.325	46.808
 TOTAL INHOUSE	81.594	86.529
TOTAL INHOUSE RDT&E	27.428	82.144
ANNUAL OPERATING COST	15.238	16.518

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	143	1	17	126
CIVILIAN	624	15	77	547
TOTAL	767	16	94	678

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLION \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
840911	104.875	201.188	1643.266	1949.274	77.902	28.075

## ...MISSION

DPG PLANS & CONDUCTS APPROVED TESTS TO ASSESS THE MILITARY VALUE OF CML WEAPONS, SMOKE/OBSCURANTS & CML-BIO DEF SYS. TESTS SPT R&D & PROVIDE BASIS FOR DEVELOPMENT OF NEW OPERATIONAL & LOGISTICAL CONCEPTS FOR EMPLOYMENT OF TESTED SYS. TESTS ARE RESPONSIVE TO USER REQUIREMENTS.

## ...CURRENT IMPORTANT PROGRAMS

CONDUCTS SERVICE DEV CML CML-BIO DEFENSE SMOKE/OBSCURANT TEST PROGRAMS  
 CONDUCTS R & D & LAB INVESTIGATIONS NECESSARY TO SUPPORT MISSION  
 CONDUCTS JT OP CML & CML-BIO DEFENSE TESTS/STUDIES FOR CINCS, SERVICES  
 CONDUCTS PROG TO SUP ARMY POLL ABATEMENT HAZARD EVAL & DEMIL OPNS  
 CONDUCTS ECOLOGICAL EPIDEMIOLOGICAL & TOXICOLOGICAL SURVL OF DPG AREA

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

INST GRIDS FOR CML CML-BIO TESTS: ARTY RG FOR CONVL & CML METAL PARTS,  
 BALLISTIC & DISSEM TESTS: WITH FIELD SMPL, SMPL MASS ANAL, MET (AUTO DATA ACQ & MESOMET NETWK)SYS. TSPI (RADAR SLAVE PHOTO)SYS; PHYS & ENVIRON TEST FAC(MIL SPEC 810) CHAMBERS FOR TOTAL AGENT CONTAINMNT; EXPLO SHIELDING PROPAGATION & OVERPRESSURE MEASMTS, OPNS SPTD BY MET RSCH ON BEHAVIOR OF CLOUDS; CML, LIFE SCI TECHN, ECOL SURVL OF DPG; CAPBL FOR PLANNING ANAL, EVAL OF TESTS, OPNS RSCH; LABS EQUIPD FOR WIDE RNG OF CML, MICROBIOL, TOXICOL, IMMUNOL, ECOL, EPIDEMIO, POLL CNTL STUDIES; CAPBL FOR PROD BIO SIMUL AG; TECHN & MASS ASSAY OF FLUORESCENT AIR TRACERS; EXTENS V COMM & RG SAFETY SYS. OUTSTANDING ARE LARGE LAND AREA, RESTRICTED AIR SPACE, LONG & FLAT ARTY RANGES, PROJECTILE RECOVERY, SONIC & ELECTROMAG STERILITY, DIVERSE SKILLS.

INSTALLATION: ELECTRONIC PROVING GROUND

FT. HUACHUCHA, AR.

CDR. COL. JAMES E. PHILLIPS

TECH. DIR. MR. GRADY H. BANISTER JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	18.475	18.478
TOTAL PROCUREMENT	8.858	6.564
TOTAL O&M	2.229	2.065
TOTAL OTHER	12.689	12.941
TOTAL ANNUAL LAB	82.201	40.048
TOTAL INHOUSE	24.862	80.647
TOTAL INHOUSE RDT&E	7.750	11.752
ANNUAL OPERATING COST	9.786	10.551

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	649	1	22	627
CIVILIAN	220	0	74	146
TOTAL	869	1	96	778

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
66000	0.000	50.400	229.776	280.176	8,600	48.500	

...MISSION

PLAN, CONDUCT, EVALUATE AND REPORT ON DEVELOPMENT AND OTHER ENGINEERING. LAB-TYPE TESTS OF GROUND AND AIRBORNE EQUIPMENT AND SYSTEMS THAT UTILIZE ELECTRONIC/ELECTROMAGNETIC TECHNOLOGY. MAINTAIN MODERN TEST FACILITY, INSTRUMENTATION, AND METHODOLOGY CAPABILITY.

...CURRENT IMPORTANT PROGRAMS

STAND-OFF TARGET ACQUISITION SYSTEM  
POSITION LOCATION REPORTING SYSTEM  
SINGLE CHANNEL GROUND AIRBORNE RADIO SYSTEM  
C8I SYS TEST CAPABILITY  
AN/MSM-105 TEST & REPAIR SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT TESTS OF HDWR/SOFTWARE, DOCTRINAL CONCEPTS/SCENARIOS TEST CAPABILITY INCL TEST OF COMM, IMAG, IMAGERY INTERPRETATION MET, RADIAC, RDR, LASER INTEL, EW, CMD/CTRL, PWR SOURCES, RPV, GND&SCTY SENSORS SYS/EQUIP INCL EMC, EMI, EMV, ECM, ECCM, TEMPEST AND INTRA/INTEROPERABILITY ANAL AS REQ. TECHNIQUES INCL BENCH AND FLD TEST W/ACCESS TO EXTENSIVE REAL EST, MATH MDL AND SIM FACS INCL: EM, CLIMATIC/STRUCT ENVIRON, INSTRUMENTED SPACE POS RG (8 FPS-16/CAPRI), TEMPEST, C8I SYS TEST INCL A REALISTIC EM BATTLEFIELD, ANTENNA PATTERN, ELECTRO-OPT AND VARIOUS ENVIRON FACILITIES INCL NVC, PERFORM RELIABILITY, AVAILABILITY AND MAINTAINABILITY (INCLUDE MAINT MANUALS, REPAIR PARTS, SPECIAL TOOLS), SAFETY AND HFE TEST, CONDUCT/PARTICIPATE IN RELATED DOCTRINAL AND CONCEPT STUDIES, AND TEST FOR ARMY, OTHER SERVICES AND DOD AGENCIES.

INSTALLATION: ELECTRONIC WARFARE LABORATORY

FT. MONMOUTH, N.J.

CDR/DIR. MR. M. ADLER

DEPTY DIR. MR. R. GIORDANO

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	56.551	58.278
TOTAL PROCUREMENT	91.755	95.082
TOTAL O&M	8.910	7.826
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	157.216	161.186
TOTAL INHOUSE	24.208	28.436
TOTAL INHOUSE RDT&E	15.963	21.278
ANNUAL OPERATING COST	2.882	2.993

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PEDS	TOTAL PROF	NON- PROF
MILITARY	84	0	5	79
CIVILIAN	412	8	206	206
TOTAL	496	8	211	285

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
6	218.928	74.882	119.894	418.154	96.011	77.200

...MISSION

DEV INITIAL ACQ AND FIRST FIELDING OF EW AND SELECTED INTEL MATERIAL  
INCL EW PROTECT OF COMBAT VEHCLS: INTERCEPT & LOCATION OF SIG ANALYSIS  
DECEP VULNERABILITY/COUNTERCOUNTERMEASURES SOFTWARE SUPPORT FOR ERADCOM  
AND SYSTEMS ACQUIS OF NON STANDARD INTEL TECHNICAL MATERIAL.

...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF ARTILLERY FIRED/HAND EMPLACED EXPENDABLE JAMMERS  
PRODUCTION OF SIGINT EQPT, QUICK LOOK AND GUARDRAIL  
DEVELOPMENT OF CON TECHNIQUES FOR SINCGARS  
DEVELOPMENT OF ECM AND WARNING EQPT FOR SELF PROTECTION OF COMBAT VEHCL  
EW VULNRABILITY INVESTIGATION OF MISSLE SYS EG PATRIOT, ROLAND, DIVAD

...FUNCTIONS/EQUIPMENT/CAPABILITIES

QUICK REACTION CAPABILITY DEV AND SPT IN INTERCPT DF SIG ANAL.  
JAMMING DECEPTION SIGNAL INTELLIGENCE ACOUSTIC INTELLIGENCE  
COUNTERMEASURES INTELLIGENCE VULNERABILITY AND COUNTER-COUNTERMEASURES  
BIG CROW (KG-185) AIRBORNE ELECTRONIC WARFARE LABORATORY  
INFRARED COUNTERMEASURES SIMULATOR (US AND FOREIGN MISSLES)  
INFRARED MEASUREMENTS AND REDUCTION  
ERADCOM TACTICAL SOFTWARE SUPPORT CENTER  
ELECTRONIC WARFARE INFO SYS FACILITY  
WAYSIDE TEST AREA (HF VHF DF) ANTENNA RANGE

## INSTALLATION: ELECTRONICS TECHNOLOGY AND DEVICES LAB

FT. MONMOUTH, N.J.

CDR/DIR. DR. C. G. THORNTON

DEPTY DIR. MR. S. F. DANKO

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	40.238	54.697
TOTAL PROCUREMENT	7.190	5.200
TOTAL O&M	0.786	0.514
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	48.164	60.411
 TOTAL INHOUSE	20.057	20.656
TOTAL INHOUSE RDT&E	19.894	20.167
ANNUAL OPERATING COST	8.240	8.522

PERSONNEL	AUTHORIZED STRENGTH	PERSONNEL DATA (END OF FY 1981)		NON- PROF
		TOTAL PHDS	TOTAL PROF	
MILITARY	0	0	0	0
CIVILIAN	279	82	163	116
TOTAL	279	82	163	116

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.081	0.032	0.007	0.120	0.000	18.190

## ...MISSION

TO DEV ESSENTL BASE IN ELECTRNCs TECH & DEVICES CONSISTNT WITH NEXT GEN-  
 ERATN ARMY SYS OPERATNL REQMTS. TO THIS END, AN ELECTRONS-ORIENTED APPL  
 R&D PROG IS PURSUED, FOCUSING ON CRITCL BARRIER DEVICES & MATRL PROBLMS  
 THAT INHIBIT UPGRADING EXISTING & DEV NEW ARMY SYSTEMS.

## ...CURRENT IMPORTANT PROGRAMS

MMW DEVICES & PULSERS FOR TARGET LOC & IDENT THRU SMOKE & FOG  
 SIG PROC DEVICES TO PERMIT NONAMMABLE COMMO & DEEP BATTLEFLD ASSMNT  
 PULSE POWER SOURCES FOR DIRECT BEAM WEAPONS & LASER DESIGNATORS  
 LIGHTWT, EFFICIENT PORTABLE POWER FOR DESIGNATORS, NV & C/E SYSTEMS  
 INTELLIGENT, INTERACTIVE TERMINALS & DISPLAY DEVICES FOR TACTICAL OPS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

ADVANCED RESRCH FACIL'S SUCH AS MBE SYSTEM, LEBES E-BEAM LITHOGRAPHIC  
 SYSTEM, ISS/SIMS, CADD & AUGER ELECTRON SPECTROSCOPY ARE AVAIL FOR PER-  
 FORMING ON PREP, PROPERTIES & CTRL OF ELEC MATERIALS & ON ELEC  
 PARTS, DEVICES IC'S & ASSEMBLIES. AREAS OF LAB EXPERTISE INCL: COMPL  
 DESIGN, FABRIC & TESTING OF IC'S, HYBRID CIRCUIT ASSEMBLIES, SEMICONDUC-  
 TOR DEVICES & CIRCUITS, SURFACE ACOUSTIC WAVE DEVICES, ELECTRON TUBES,  
 DISPLAY DEVICES, PRIMARY, SECONDARY & SPEC PURPOSE PWR SOURCES, ELECTRO-  
 CHEM RESEARCH CHARACTERIZATION OF ELEC MATERIALS. QUICK TURNAROUND  
 CUSTOMIZED & FABRIC OF LSI ARRAYS ARE AVAIL TO CIRCUIT & SYSTEM DE-  
 SIGNERS IN OTHER ARMY LABS. LAB ALSO PROVIDES ARMY CUSTOMERS WITH EXPRT  
 SERVICES INCL DIRECT R&D DEV, SUPPORT, CONSULTATION & DIRECT PARTICIPA-  
 TION IN SYSTEM DEV.

## INSTALLATION: ENGINEER TOPOGRAPHIC LABORATORIES

FT. BELVOIR, VA.

CDR. COL. EDWARD K. WINTZ

DIR. MR. R. P. MACCHIA

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	27.826	28.853
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.463	2.345
TOTAL OTHER	0.240	0.249
TOTAL ANNUAL LAB	30.035	31.462
 TOTAL INHOUSE	11.857	12.970
TOTAL INHOUSE RDT&E	10.085	11.185
ANNUAL OPERATING COST	8.112	8.667

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL FADS	TOTAL PROF	NON-
				PROF
MILITARY	15	1	5	10
CIVILIAN	299	19	157	142
TOTAL	814	20	162	152

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)	COST (MILLION \$)					
		LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
83	90.722	7.000	18.800	111.022		6.000	18.177

## ...MISSION

RESEARCH AND DEVELOPMENT IN TOPOGRAPHIC SCIENCES, MAPPING, POINT POSITIONING, AND MILITARY GEOGRAPHIC INFORMATION, OPERATIONAL SUPPORT, TERRAIN ANALYSIS, AND SCIENTIFIC/ADVISORY SERVICES, REMOTE SENSING, COMPUTER TECHNOLOGY, AND ENVIRONMENTAL EFFECTS DATA.

## ...CURRENT IMPORTANT PROGRAMS

SUPPORT TO PERSHING II  
 SUPPORT TO MX MISSILE PROGRAM  
 SUPPORT TO ARMY SPACE PROGRAM  
 AUTOMATED FEATURE EXTRACTION DEVELOPMENT  
 QUICK RESPONSE MULTICOLOR PRINTER, QRMP.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE A CARTOGRAPHIC LABORATORY TO STUDY THE PROBLEMS ASSOCIATED WITH HANDLING DIGITAL CARTOGRAPHIC DATA, A DIGITAL IMAGE PROCESSING LABORATORY TO STUDY THE MANIPULATION AND ENHANCEMENT OF TERRAIN IMAGERY FOR OBTAINING MAPPING AND GEOGRAPHIC DATA, COMPUTER ASSISTED PHOTO-INTERPRETATION STATIONS FOR EXTRACTION OF TERRAIN FEATURES, AND A COHERENT OPTICS LABORATORY FOR DETERMINING THE POTENTIAL OF COHERENT OPTICS FOR TOPOGRAPHIC DATA PROCESSING. COMPUTATIONAL EQUIPMENT INCLUDES THE CDC 6400, GOODYEAR STARAN S-1000, DEC PDP 1150 AND PDP 1170. OTHER SPECIALIZED EQUIPMENT INCLUDE A COMTAL, DICOMED, PDS DIGITAL AUTOMATED MICRODENSITOMETERS, A RECORDING OPTICAL SPECTRUM ANALYZER AND PRECISION MENSURATION EQUIPMENT.

INSTALLATION: ENGINEER WATERWAYS EXPERIMENT STATION

VICKSBURG, MS.

CDR. COL. MR. T. C. CREEL

TECH. DIR. MR. F. R. BROWN

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	19.222	21.445
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.805	0.250
TOTAL OTHER	47.978	49.155
TOTAL ANNUAL LAB	67.505	70.848
 TOTAL INHOUSE	 56.810	 59.268
TOTAL INHOUSE RDT&E	17.440	18.585
ANNUAL OPERATING COST	6.687	8.254

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	20	0	14	6
CIVILIAN	1862	87	514	848
TOTAL	1882	87	528	854

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
847	1789.308	358.215	169.444	2206.967	21.960	49.454

## ...MISSION

MIL.&CIV. FUNDED RSCH, DEV&INVES. IN HYD, ECOLOGY, PERM&EXPEDIENT PAVEMENTS, SOIL, CONC., EXPLO. WPN. EFF, EXPLO. EXCAVATION, VEH. MOBILITY & ENVIRONMENTAL ASPECTS OF MIL. OPERATIONS. OPERATE TECH LIBRARY&GOVERNMENT CEMENT POZZOLAN TESTPROGRAM. SERVES CE, DARCOM, DNA, AF, NAVY, DOE, EPA & OTHER AGENCIES.

## ...CURRENT IMPORTANT PROGRAMS

HYD&MATH MODELING TO SOLVE RIVER, TIDAL, WIND-WAVE, ECOLOGICAL&STRUC. PROBS. RSCH. ON VEH MOBILITY, REMOTE SENSING, ENVIR. IMPACT, & EARTHQUAKE DESGN CRIT. NUC&HE RSCH TO DEV. CRIT. FOR DESGN. OF PROTECT. STRUC, BARRIERS&EXCAVATIONS. RSCH&DEV. OF NEW&IMPROVED ENG. DESGN. CRIT. FOR ROADS, STOR. AREAS,&AIRFIELDS. RSCH&DEV. OF CEMENTITIOUS. MATLS. AND RSCH OF MASS AND STRUCTURAL CONCRETE

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CAPABLE OF PERF GEN INVEST IN FLD OF HYD, SOIL MECH, CONCRETE, MOBILITY OF MIL VEH, EXPLO. EFF, ECOLOGY&EXPLO. EXCAVATION AND DEV OF STRUCT & PAVEMENT DESIGN CRIT. BY BASIC & APP. RSCH; CAPABLE OF DEV. METHODS&TECHNOLOGY FOR TESTING MATLS&EQUIP IN SUPPORT OF THE CE MISSION. WES RESERVATION CONTAINS BLDGS, TEST SITES, SPECIAL AND OTHER PLANT SUPPORT EQUIP. TEST SITES & FAC. FOR SPECIAL PURPOSES ARE MAINT. IN OTHER AREAS ON PERM./TEMP. BASIS. FAC. INCL. FLUMES OF DIFF TYPES&SIZES, WAVE&TIDE GENERATORS. WELL EQUIPPED SOILS, CONC, CHEM, CALIB, ELEC&TEMP CONTROLLED ENVIRONMENTAL AND LYMOLOGICAL LABS, X-RAY DIFFRACTION & SPECTROSCOPY EQUIP, SMALL AND LARGE BLAST LOAD GENERATORS, 200K DYNAMIC LOADER, MOBILITY RSCH FAC, SINGLE AND MULTIPLE WHEEL LOAD CARTS, SURFACE BLAST EFF FAC, HIGH&LOW FREQ VIBRATORS, ELECTRONBEAM MICROSCOPE, LARGE SCALE COMP. FACILITY AND TECH. LIBRARY.

INSTALLATION: FIELD ARTILLERY BOARD

FT. SILL, OK.

PRES. COL. C. S. NOBLES

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	1.208	1.761
TOTAL PROCUREMENT	0.029	0.135
TOTAL O&M	0.198	0.691
TOTAL OTHER	2.868	8.007
TOTAL ANNUAL LAB	4.098	5.594
 TOTAL INHOUSE	 4.098	 5.594
TOTAL INHOUSE RDT&E	1.208	1.761
ANNUAL OPERATING COST	0.245	0.325

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	152	0	87	115
CIVILIAN	87	0	5	82
TOTAL	189	0	42	147

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
0	18.938	32.788	17.720	69.891	0.000	2.451	

...MISSION

PLAN CONDUCT AND REPORT ON OT I OT II AND OTHER USER-TYPE TESTS  
PARTICIPATE IN DT I AND DT II AS DIRECTED  
PROVIDE ADVICE TO PROPOSER AGENCIES AND DEVELOPERS  
CONDUCT OTHER TESTS AND EVALUATIONS AS DIRECTED BY TRADOC

...CURRENT IMPORTANT PROGRAMS

OPERATIONAL TEST II FIELD ARTY AMMO SPT VEHICLE  
OPERATIONAL TEST II M110 CREW BALLISTIC SHIELD  
OPERATIONAL TEST II TACFIRE TAPE VALIDATION VERSION 8  
OPERATIONAL TEST II FIRE SPT TEAM DIGITAL MSG DEVICE  
OPERATIONAL TEST II PROJ SCREEN SMOKE XM825

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TWO MET STATIONS  
TEST ITEMS ADDITIONAL SUPPORT IS OBTAINED FROM USAFACFS WHEN NEEDED

INSTALLATION: FIRE CONTROL & SMALL CAL. WPNS SYSTS LAB DOVER, N.J.

CDR. DIR. COL. MURRAY G. SWINDLER DEP. DIR. DR. DONALD A. GYORG

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	80.468	81.758
TOTAL PROCUREMENT	25.071	26.790
TOTAL O&M	11.320	12.014
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	66.859	70.562
 TOTAL INHOUSE	52.993	57.768
TOTAL INHOUSE RDT&E	22.747	24.902
ANNUAL OPERATING COST	14.000	18.200

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	14	0	10	4
CIVILIAN	608	24	890	218
TOTAL	622	24	400	222

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1518	84.515	86.607	24.548	195.665	28.001	84.637

...MISSION

ACCOMPLISH RESEARCH EXPLORATORY, ADVANCED AND ENGINEERING DEVELOPMENT LIFE CYCLE TECH RESPONSIBILITY FOR FIRE CONTROL AND ALL WEAPON SYSTEMS, AMMUNITION, AUXILIARY ITEMS THROUGH 40MM CAL. FIRE CONTROL INCLUDES ALL COMBAT VEHICLES, FIELD ARTILLERY, HELICOPTERS, AIR DEFENSE AND INFANTRY.

...CURRENT IMPORTANT PROGRAMS

JOINT SERVICE SMALL ARMS PROGRAM  
FIRE CONTROL AND SMALL CALIBER ARMAMENT TECHNOLOGY  
SQUAD AUTOMATIC WEAPON  
SUBMACHINEGUN, 5.56MM PORT FIRING, M281  
DIVISION AIR DEFENSE GUN SYSTEM SUPPORT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LABORATORY CONDUCTS RESEARCH EXPLORATORY, ADVANCED AND ENGINEERING DEVELOPMENT IN SMALL CALIBER WEAPON SYSTEMS AND FIRE CONTROL SYSTEMS. IT MAINTAINS TEST BED FACILITIES TO EVALUATE SYSTEMS IN AREAS OF FIRE CONTROL, AIR DEFENSE AND BOMBAT VEHICLES. LAB HAS CAPABILITY FOR DESIGN AND EVALUATION OF OPTICAL, ELECTRO-OPTICAL AND ELECTROMAGNETIC SYSTEMS, SIGHTING DEVICES, DIGITAL AND ANALOG SIGNAL PROCESSORS, GUN/TURRET STABILIZATION AND CONTROL SYSTEMS, SMALL CALIBER WEAPONS INCLUDING AUTOMATIC CANNONS, WEAPON MECHANISMS, MOUNTS, PROJECTILES, PENETRATORS, SHAPED CHARGE LINERS, PROPELLANTS, PRIMERS, CARTRIDGE CASES, METAL AND PLASTIC MATERIALS AND ADHESIVES, AND MANUFACTURING TECHNOLOGY. JOINT SERVICE SMALL ARMS PROGRAM HAS RESPONSIBILITY FOR ALL SMALL ARMS CONVENTIONAL AND SPECIAL WEAPONS SYSTEMS FOR ALL USERS.

INSTALLATION: HARRY DIAMOND LABORATORIES

WASHINGTON, D.C.

CDR/DIR. COL. A. R. BURKE

TECH. DIR. DR. W. W. CARTER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	68.834	59.477
TOTAL PROCUREMENT	86.691	82.800
TOTAL O&M	5.116	8.091
TOTAL OTHER	0.747	0.690
TOTAL ANNUAL LAB	155.838	146.055
TOTAL INHOUSE	67.228	62.879
TOTAL INHOUSE RDT&E	35.206	38.656
ANNUAL OPERATING COST	18.867	13.560

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	5	0	2	4
CIVILIAN	1199	50	880	869
TOTAL	1205	50	882	878

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2816	515.000	118.000	1240.004	1868.004	52.842	87.617

...MISSION

MISSION: ELECTRONIC FUZES NUCLEAR WEAPONS EFFECTS TECHNOLOGY SPECIAL RADAR TECH'Y AND SYSTEMS ELECTRONIC TECH'Y COMPONENTS CIRCUITS AND MATERIALS FLUIDIC COMPONENTS AND SYSTEMS ELECTRO-OPTICAL DEVICES SELECTED INSTRUMENTATION/SIMULATORS COUNTERMEASURES (CM) AND COUNTER-CM

...CURRENT IMPORTANT PROGRAMS

CURRENT SIGNIFICANT PROGRAMS: DEV OF XM818E1 FUZE FOR PATRIOT MISSLE R&D ON FLUIDICS ORDNANCE ELECTRONICS NUCLEAR WEAPONS EFFECTS AND NMMW DEVELOPMENT OF XM445 FUZE FOR MULTIPLE LAUNCH ROCKET SYSTEM DEVELOPMENT OF XM749 AND M785 FUZES FOR 158MM AND 8 IN NUCLEAR ARTILLERY DEV OF ART'Y DELIVERED EXPENDABLE JAMMERS; INSTALLATION SECURITY RADAR

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT AND FACILITIES:

NUCLEAR FACILITIES: GAMMA RAY SIMULATOR (AURORA) HIGH INTENSITY FLASH X-RAY (HIF) COBALT CD AND ELECTROMAGNETIC PULSE SIMULATORS.

ELECTRONIC DESIGN FACILITIES: THICK FILM HYBRID CIRCUIT FACILITIES

MICROWAVE ANECHOIC CHAMBER

FUZING FACILITIES: ARTILLERY SIMULATOR ENVIRONMENTAL TESTING

INSTALLATION: HUMAN ENGINEERING LABORATORY

ABERDEEN PRO.GR., MD.

DIR. DR. JOHN D. WEISZ

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	11.586	13.769
TOTAL PROCUREMENT	0.079	0.100
TOTAL O&M	0.347	0.850
TOTAL OTHER	0.423	0.475
TOTAL ANNUAL LAB	12.886	14.694
 TOTAL INHOUSE	9.295	9.525
TOTAL INHOUSE RDT&E	8.446	8.600
ANNUAL OPERATING COST	2.690	3.000

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PIIDS	TOTAL PROF	NON- PROF
MILITARY	88	1	16	17
CIVILIAN	147	16	105	42
TOTAL	180	17	121	59

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
12	46.944	7.056	34.062	88.062	4.412	6.983

...MISSION

CONDUCTS FUNDAMENTAL AND APPLIED RESEARCH IN HUMAN FACTORS ENGINEERING  
PROVIDES DIRECT DESIGN SUPPORT TO ALL MATERIEL DEVELOPMENT PROGRAMS SPONSORED BY DARCOM.  
SIXTEEN DETACHMENTS AND/OR LIAISON REPRESENTATIVES HAVE BEEN ESTABLISHED AT DARCOM COMMANDS, CRTC AND TRADOC CTRS/SCHOOLS.

...CURRENT IMPORTANT PROGRAMS

COMMAND CONTROL COMMUNICATIONS INTELLIGENCE  
ROBOTICS-AUTOMATION  
TRAINING TECHNOLOGY  
INDIVIDUAL SOLDIER  
CLOSE COMBAT LIGHT AND HEAVY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

DATA ACQUISITION AND BIOTELEMETRY SYSTEMS  
GAT 2M HELICOPTER SIMULATOR  
COMMAND CONTROL SIMULATOR SYSTEM/TEST FACILITY  
ACOUSTICAL AND ANECHOIC CHAMBER REVERBERANT ROOM  
HELFEST LOGISTICS TESTING FACILITIES  
EYE MOVEMENT MEASURING DEVICE  
SMALL ARMS TEST FIRING RANGE  
WOOD AND METAL WORKING TEST SUPPORT CAPABILITY  
HUMAN FACTORS DATA BANK  
ARMOR TEST SITE

INSTALLATION: INFANTRY BOARD

FT. BENNING, GA.

CDR. COL. ARTHUR J. KINZEL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	1.995	2.278
TOTAL PROCUREMENT	0.101	0.201
TOTAL Q&M	0.059	0.095
TOTAL OTHER	2.062	2.701
TOTAL ANNUAL LAB	4.217	5.275
 TOTAL INHOUSE	 4.217	 5.275
TOTAL INHOUSE RDT&E	1.995	2.278
ANNUAL OPERATING COST	1.249	1.689

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	122	0	2	120
CIVILIAN	55	0	5	50
TOTAL	177	0	7	170

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	0.000	82.208	80.156	62.859	3.000	0.859

...MISSION

PLAN CONDUCT REPORT ON OPERATIONAL TESTS 1/2/8. FORCE DEVELOPMENT TESTS OTHER TESTS OF EQUIPMENT & ANCILLARY ITEMS TO BE USED BY INFANTRY UNITS FOR COMMAND, CONTROL, FIREPOWER, TARGET ACQUISITION, GROUND SURVEIL- LANCE, FIRE CONTROL GROUND MOBILITY & TNG & CHEMICAL/BIOLOGICAL EQUIP.

...CURRENT IMPORTANT PROGRAMS

INFANTRY MANEUVER CONCEPT (MOTORIZED)

GENERAL PURPOSE SHOE

INDIVIDUAL LIFT DEVICE

MOVING TARGET RIFLE MARKSMANSHIP TRAINER

PROTECTIVE MASK XM80 OTIIA

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AUTOMATED, COMPUTERIZED AUTOMATIC & SMALL ARMS WEAPONS RANGE

CLOTHING & EQUIPMENT TEST FACILITY

MANNED EVASIVE TARGET TANKS

NOVA 812 COMPUTER CAPABILITIES

## INSTALLATION: INSTITUTE OF DENTAL RESEARCH

WASHINGTON, D.C.

CDR. COL. THOMAS P. SWEENEY

DEP. FOR RSCH. DR. GINO BATTISTONE

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	1.818	2.498
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.159	0.171
TOTAL OTHER	1.883	2.726
TOTAL ANNUAL LAB	8.866	5.890
 TOTAL INHOUSE	2.641	4.169
TOTAL INHOUSE RDT&E	1.098	1.272
ANNUAL OPERATING COST	0.519	0.777

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL		NON- PROF
			PROF	NON- PROF	
MILITARY	82	0	88		44
CIVILIAN	27	2	11		16
TOTAL	109	2	49		60

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	9.852	5.696	14.153	29.701	0.875	2.258

## ...MISSION

DEVELOP TECHNIQUES TO TREAT WAR-RELATED MAXILLOFACIAL INJURIES AND DENTAL DISEASES. PREVENTION AND TREATMENT OF FIELD DENTAL EMERGENCIES. TO PROVIDE DENTAL RESIDENCY PROGRAMS. TO PROVIDE A DENTAL CLINIC FOR RESEARCH AND TRAINING.

## ...CURRENT IMPORTANT PROGRAMS

Biodegradable materials for long-term slow release and organ replacement  
use of saliva for detecting exposure to chemical agents in the field  
R&D of new and improved dental materials for military usage world-wide  
studies on methods of improving combat contaminated wound healing  
studies for improving methods of controlling infections in combat wounds

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

Test and evaluate the physical, chemical and mechanical properties of dental metals, alloys, plastics and polymers. Evaluate chgs due to environment and transportation. Conduct rsch in microbiology, chemistry, biochemistry, immunology, radiation effects, pharmacology, physiology, histology & pathology as they relate to dental military rsch. Conduct epidemiological studies on trauma, disease, man/machine interface trauma and field dental emergencies. Study new materials and methods more clinically effective in the field. Develop and evaluate new techniques and new materials to treat combat wounds and to test these in various biologic media. Disseminate as practical all information to the field. Study means of treating dental emergencies far forward in the field and develop the materiel required.

INSTALLATION: INSTITUTE OF SURGICAL RESEARCH

FT. SAM HOUSTON, TX.

CDR. COL. BASIL A. PRUITT

TECH. DIR. DR. AUTHUR D. MASON JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	2.719	3.226
TOTAL PROCUREMENT	0.000	0.000
TOTAL QSM	0.000	0.000
TOTAL OTHER	4.341	4.169
TOTAL ANNUAL LAB	7.060	7.895
 TOTAL INHOUSE	 6.782	 7.121
TOTAL INHOUSE RDT&E	2.441	2.952
ANNUAL OPERATING COST	1.177	1.180

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	152	18	54	98
CIVILIAN	81	8	81	50
TOTAL	233	21	85	148

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	26.424	1.800	22.400	50.624	2.813	2.850

...MISSION

CONDUCTS BASIC & CLINICAL RSCH ON SEVERE BURN INJURIES & THEIR COMPLCTNS  
PROVIDES TREATMENT FOR BURNED PATIENTS AND TRAINS SPECIFIED PERSONNEL IN  
THE TOTAL MANAGEMENT OF SUCH PATIENTS.

...CURRENT IMPORTANT PROGRAMS

BURN INFECTION, TREATMENT AND PREVENTION  
METABOLISM AND NUTRITIONAL EFFECTS OF BURN INJURY IN SOLDIERS  
INFECTION AND MICROBIOLOGIC SURVEILLANCE OF TROOPS WITH THERMAL INJURY  
ALTERATION OF HOST RESISTANCE IN BURNED SOLDIERS  
ASSESSMENT OF L-TRIIODOTHYRONINE THERAPY IN THERMALLY INJURED SOLDIERS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

OPERATES 80 BEDS FOR SERIOUSLY BURNED AND INJURED PATIENTS. PROVIDES  
CLINICAL LABORATORY SUPPORT AND RESEARCH CAPABILITIES IN THE FIELDS OF  
PATHOLOGY (INCLUDING USE OF ELECTRON MICROSCOPE), MICROBIOLOGY, EXPERI-  
MENTAL SURGERY, RENAL PHYSIOLOGY AND BIOCHEMISTRY. MAINTAINS AN ANIMAL  
COLONY, ELECTRONIC SHOP, MACHINE SHOP, SURGICAL LIBRARY, METABOLIC  
CHAMBER AND COMPUTER FACILITY

INSTALLATION: INTELLIGENCE & SECURITY BOARD

FT HUACHUCHA, AR.

PRES. COL. ROGER L. DUNLAP

TECH. DIR. PHILLIP E. WRALSTAD

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981		1982
	(ACTUAL)	(ACT + EST)	
TOTAL RDT&E	1.751		8.340
TOTAL PROCUREMENT	0.858		0.815
TOTAL OEM	0.255		1.927
TOTAL OTHER	0.000		0.000
TOTAL ANNUAL LAB	2.859		6.082
 TOTAL INHOUSE	0.908		1.721
TOTAL INHOUSE RDT&E	0.861		1.836
ANNUAL OPERATING COST	0.618		0.695

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	98	0	29	69
CIVILIAN	24	2	11	18
TOTAL	122	2	40	82

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	4.000	6.627	21.667	82.294	0.616	8.528

...MISSION

PLAN, CONDUCT AND REPORT ON OT I, II, III AND OTHER USER TYPE TESTS OF INTELLIGENCE + SECURITY MATERIEL. PROVIDE ADVICE ON TEST AND EVAL MATTERS TO MATERIEL DEVELOPERS, OTHER SVCS AND PRIVATE INDUSTRY. CONDUCT OTHER RDT&E TESTS AS DIRECTED BY CDR TRADOC.

...CURRENT IMPORTANT PROGRAMS

IMAGERY DISSEMINATION TECHNIQUES (SLOW SCAN)  
COMBAT ELECTRONIC WARFARE INTELLIGENCE BATTALION  
REMOTELY MONITORED BATTLEFIELD SENSOR SYSTEM  
QUICK FIX WITH DF  
SPECIAL ELEC MISSION ACFT-ACFT SURVIVABILITY EQP

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EW MONITORING FAC: TRANSPORTABLE 80 FT VAN RECEIVE 10KHZ TO 40GHZ; DF 20MHZ TO 40GHZ: ANALYSIS EQUIPMENT. VULNERABILITY MOBILE TRANSMITTER-A: TRANSPORTABLE 40 FT VAN RECEIVE 900KHZ TO 1GHZ; JAM 2MHZ TO 1GHZ WITH 1000W TRANSMITTERS: ANALYSIS EQUIPMENT. NON-COMM EMITTER SIMULATOR: 8.5 TO 17.0 GHZ; 200W OUTPUT SIMULATING 20 THREAT RADARS; MODES COMPUTER CONTROL VIA DATA LINK, TRANSPORTABLE; REPROGRAMMABLE. COMM EMITTER SIMULATOR: 2 TO 500MHZ; 20W OUTPUT SIMULATING 50 THREAT COMM TYPES; MODULATE AND CONTROL THROUGH SYSTEM MICROPROCESSOR, RECORDER, OR VIA DATA LINK; TRANSPORTABLE; REPROGRAMMABLE. OPERATIONAL TEST CON CEN: BUILDING HOUSES REALTIME RANGE CONTROL. SYS CON FAC (VAX11/780 AND DEC-10 COMPUTERS): DATA PROCESSING AND AUTOMATED RANGE CON.

INSTALLATION: KWAJALEIN MISSILE RANGE, MARSHALL ISLANDS

APO SAN FRANCISCO

CDR. COL. R. J. FEIST

DEPUTY DIR. MR. O. R. OVA

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	143.785	164.730
TOTAL PROCUREMENT	0.000	0.000
TOTAL OEM	0.000	0.000
TOTAL OTHER	7.535	4.780
TOTAL ANNUAL LAB	151.270	169.510
 TOTAL INHOUSE	6.732	7.297
TOTAL INHOUSE RDT&E	5.477	5.867
ANNUAL OPERATING COST	0.529	0.558

PERSONNEL	AUTHORIZED STRENGTH	PERSONNEL DATA (END OF FY 1981)		NON- PROF
		TOTAL PHDS	TOTAL PROF	
MILITARY	27	0	17	10
CIVILIAN	108	1	52	51
TOTAL	180	1	69	61

ACRES	SPACE AND PROPERTY			COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)			REAL	PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
1361	0.000	162.309	2244.364	2406.678	235.460	228.941

## ...MISSION

PLAN, MANAGE, DIRECT & COORDINATE ACTIVITIES OF THE KMR. PROVIDE: TECH & LOG S UPPT OF BMD R&D PROGS/TECH INSTR SPT OF STRATEGIC OFF WEAPON SYS DEV & OPER TESTS/DATA COLL SUPT FOR DOD INTEL COMM. PRIN ADV PERT TO KMR RELATI ONS W/TRUST TERR OF PACIFIC ISLANDS/GOV'T OF THE MARSHALL ISLANDS.

## ...CURRENT IMPORTANT PROGRAMS

BALLISTIC MISSILE DEFENSE R&D TESTING  
 USAF BMD ADVANCED STRATEGIC MISSILE SYSTEMS R&D TESTING  
 MINUTEMAN II AND MINUTEMAN III USAF SAC OPERATIONAL TESTING  
 SPACE OBJECT IDENTIFICATION  
 SPACE DETECTION AND TRACKING SYSTEM

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

ALCOR, TRADEX, ALTAIR, MULTISTATIC MEASUREMENT SYSTEM, KREMS TO CONUS HIGH SPEED DATA LINK, 2 AN/MP5 36, AN/TPQ 18, AN TPX 42 RADARS, 4 RADOTS, 5 SUPER RADOTS, 7 BALLISTIC CAMERAS, 4 SPECTRAL CAMERAS, PHOTO LAB, S BAND TELEMETRY RECEIVING SYSTEMS INCL 8 AUTO TRACK ANTENNAS, 1 MOBILE RELAY SYS RECEIVE AND RECORD SYS, DATA SEPARATION & DISPLAY SYS AND DATA DISTRIBUTION SYS, LONG HAUL AND INTRA ATOLL COMO SYS, METEROLOGICAL SYS, LAUNCH ORDNANCE FAC TIMING AND COUNTDOWN SYS, FREQUENCY CONTROL AND ANALYSIS SYS, 7600/6400 INSTRUMENTATION CONTROL CENTER, AIR TRAFFIC CONTROL SYS INCL TACAN LOW FREQUENCY HOMING BEACON AND AC COMMUNICATIONS, CLOSED CIRCUIT TV SYS, DATA REDUCTION FACILITY AND INSTRUMENTATION SYS ACCURACY ANALYSIS CAPABILITY, GROUND PORTION OF FLIGHT TERMINATION AND CONTROL SYS, AND RANGE SAFETY SYSTEM.

INSTALLATION: LARGE CALIBER WEAPONS SYSTEMS LAB

DOVER, N.J.

CDR. COL. R. E. PHILLIP

TECH. DIR. DR. J. T. FRASIER

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981		1982
	(ACTUAL)	(ACT + EST)	
TOTAL RDT&E	135.074		134.745
TOTAL PROCUREMENT	68.888		65.000
TOTAL O&M	7.543		7.600
TOTAL OTHER	0.000		0.000
TOTAL ANNUAL LAB	206.000		207.845
 TOTAL INHOUSE	105.805		106.460
TOTAL INHOUSE RDT&E	48.904		48.460
ANNUAL OPERATING COST	20.861		21.568

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	48	1	10	88
CIVILIAN	1704	82	1049	655
TOTAL	1747	88	1059	688

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4835	369.020	249.577	80.785	699.892	64.125	69.275

## ...MISSION

MAINTAIN A STRONG BASIC AND EXPLORATORY TECHNOLOGY BASE. DES AND RES WPNS SYS-GUN/AMMO, LARGER THAN 40MM FOR TANKS, ARTY, MORTAR, RECOILLESS GUNS, AIR DEFENSE, MINES AND DEMO SYS, EXPLOS AND WHDS. ENG SPT DURING PROCUREMENT, PRODUCTION AND FIELD USE. PREVENT TECHNOLOGICAL SURPRISE.

## ...CURRENT IMPORTANT PROGRAMS

SPT PM-CAWS, M509 AND M488 PROJ, M692 ADAM, XM718 RAAM, DSWS.

SPT XM1 TANK, 120MM AMMO/GUN.

SPT PM-NUCL, PERSHING 2, XM785, XM758 8 INCH PROJ.

SCATTERABLE MINE SYSTEMS, MOPMS AND GEMMS.

ARTILLERY-SADARM, GUN PROPULSION INCL CHG DSG, REDUCED WEAR AND EROSION.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

DEVELOP NEW ITEMS. A NEW IGNITION, RHEOLOGICAL AND COMBUSTION LAB WAS COMPLETED. A NEW CHEMISTRY LAB VALUED AT 5.5M WAS COMPLETED. FACILITIES AND EQUIPMENT RESOURCES IS CONTAINED IN COMPLEX OF ENG AND LAB BLDGS. 15ADMIN BLDGS, 86 LAB BLDGS, AND 47 STORAGE BLDGS.

INSTALLATION: LETTERMAN ARMY INSTITUTE OF RESEARCH

PRESIDIO, S.F., CA.

CDR. COL. JOHN D. MARSHALL JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	8.898	10.188
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.146	0.164
TOTAL OTHER	8.899	4.485
TOTAL ANNUAL LAB	12.448	14.787
 TOTAL INHOUSE	 9.977	 11.450
TOTAL INHOUSE RDT&E	6.482	6.851
ANNUAL OPERATING COST	4.257	4.617

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	161	88	110	51
CIVILIAN	112	14	27	85
TOTAL	273	52	137	136

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
9	188.198	86.506	805.809	475.018	42.680	9.126

...MISSION

TO PROVIDE MEDICAL RESEARCH CAPABILITY AND CONDUCT RESEARCH IN AREAS OF LASER BIOEFFECTS, MILITARY TRAUMA AND RESUSCITATION, BLOOD PRESERVATION, CHRONIC MAMMALIAN TOXICOLOGY, DERMAL PROTECTION AGAINST CBR HAZARDS, CASUALTY MANAGEMENT AND OTHER AREAS AS DIRECTED BY CDR, USA MED R&D CMD.

...CURRENT IMPORTANT PROGRAMS

DETERMINATION OF SAFE THRESHOLDS OF COHERENT RADIATION

RESUSCITATION SOLUTIONS FOR THE ACUTELY INJURED

CHRONIC MAMMALIAN TOXICOLOGY

ADVERSE EFFECTS ON HUMAN SKIN BY ENVIRONMENTAL FACTORS

COMBAT CASUALTY CARE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

SURGICAL OPERATING ROOMS, ENVIRONMENTAL ROOMS, GERM-FREE ANIMALS, SCANNING TRANSMISSION ELECTRON MICROSCOPES, AUTO-ANALYZERS/RECORDERS, AUTOMATIC BETA-GAMMA COUNTERS, GAMMA CAMERA, MASS SPECTROMETER. RESEARCH INCLUDES BIOMEDICAL COMPUTER RESEARCH, EXPERIMENTAL SURGERY, STUDIES ON BLOOD PRESERVATION, OPTIMAL BLOOD STORAGE CONDITIONS, AND CELL-FREE RESUSCITATING SOLUTIONS, MAINTAINING BREEDING COLONIES OF SPECIAL ANIMAL STRAINS, COMPUTER ENHANCED TOXICOLOGICAL RESEARCH AND BIOMEDICAL ASPECTS OF CHEMICAL DEFENSE.

## INSTALLATION: MATERIALS AND MECHANICS RESEARCH CENTER

WATERTOWN MA

CDR. COL. G. SIBERT

DIR. DR. E. S. WRIGHT

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	80.854	87.718
TOTAL PROCUREMENT	1.142	1.266
TOTAL O&M	5.518	4.584
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	87.009	48.568
 TOTAL INHOUSE	19.979	28.117
TOTAL INHOUSE RDT&E	15.796	19.000
ANNUAL OPERATING COST	8.478	6.424

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	17	1	8	9
CIVILIAN	606	63	239	867
TOTAL	623	64	247	876

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
48	381.778	88.261	172.848	642.687	14.835	22.055

## ...MISSION

MANAGE THE DARCOM STRUCTURAL MATERIALS AND MECHANICS PROGRAM AS LEAD LAB FOR MATERIALS, MECHANICS AND MATERIALS TESTING TECHNOLOGY. CONDUCT RESEARCH AT THE FOREFRONT OF TECHNOLOGY TO PROVIDE THE ADVANCED MATERIALS REQUIRED FOR PRESENT AND FUTURE ARMY WEAPONS SYSTEMS AT REASONABLE COSTS.

## ...CURRENT IMPORTANT PROGRAMS

METAL AND ORGANIC MATRIX COMPOSITES FOR LIGHTWEIGHT MATERIEL APPLICATION  
 ADVANCED ARMOR AND ARMOR PENETRATOR MATERIALS INCLUDING LASER HARDENING  
 STRUCTURAL INTEGRITY, NDT, AND LIFE PREDICTION/RELIABILITY MECHANICS  
 CERAMICS FOR ELECTRO-OPTICAL, ENGINE, AND GUN TUBE APPLICATIONS  
 MATERIALS PROCESSING AND CHARACTERIZATION: METALS ORGANICS AND CERAMICS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE CENTER POSSESSES THE IN-HOUSE EXPERTISE AND FACILITIES TO PERFORM R&D PROJECTS RANGING FROM THE SYNTHESIS OF NEW AND IMPROVED MATERIALS AND DESIGNS TO THE PROTOTYPE MANUFACTURE OF COMPONENTS FOR ARMY WEAPONS SYSTEMS. METALS PROCESSING EQUIPMENT INCLUDES: CASTING, FORGING, ROLLING, HEAT TREATING, JOINING, PLATING, ISOSTATIC PRESSING, VACUUM ARC MELTING, AND MACHINING. CERAMIC PROCESSING EQUIPMENT: SLIP CASTING, HOT PRESSING, SINTERING AND GRADIENT FURNACE CRYSTAL GROWTH. POLYMER/COMPOSIT PROCESSING EQUIPMENT: INJECTION MOLDING, LAMINATING, FILM FORMING AND ORIENTATION, FILAMENT WINDING, PULTRUSION, FOAM PROCESSING, TAPE LAYUP, VACUUM FORMING AND PILOT POLYMER PRODUCTION. QC AND NDT EQUIPMENT: ULTRASONICS, XRAY AND NEUTRON RADIOGRAPHY, SPECTROSCOPY, HOLOGRAPHY, CHEMICAL ANALYSIS, METALLOGRAPHY AND OPTICS. OTHER: U AND BE MACHINING, BALLISTIC RANGE AND POWDER CHARACTERIZATION.

## INSTALLATION: MATERIEL SYSTEMS ANALYSIS ACTIVITY

ABERDN.PROV.GROUND,M

DIR. MR. KEITH A. MYERS

DEP. DIR. BG JAMES E. DRUMMUND

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	18.385	21.979
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.891	4.791
TOTAL OTHER	0.729	0.787
TOTAL ANNUAL LAB	22.005	27.557
 TOTAL INHOUSE	 14.128	 18.494
TOTAL INHOUSE RDT&E	12.095	14.885
ANNUAL OPERATING COST	2.660	2.860

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	82	0	9	23
CIVILIAN	449	23	802	147
TOTAL	481	28	811	170

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	8.140	100.276	1.715	110.131	2.070	1.289

## ...MISSION

PROVIDES THE CENTRAL INDEPENDENT TECHNICAL CAPABILITY FOR DARCOM FOR THE CONDUCT OF MAJOR SYSTEMS ANALYSIS AND COST EFFECTIVENESS STUDIES, SERVES AS DARCOM LEAD ACTIVITY FOR SURVIVABILITY AND RELIABILITY, AVAILABILITY AND MAINTAINABILITY METHODOLOGY.

## ...CURRENT IMPORTANT PROGRAMS

TEST DESIGN & EVAL OF AAH, HELLFIRE, PATRIOT, BLACKHAWK AND STINGER.  
DEVELOP ITEM LEVEL PERFORMANCE/EFFECTIVENESS EVALUATIONS FOR AIR DEFENSE AVIATION, ARTILLERY, BARRIER, INFANTRY, ARMORED AND C3 SYSTEMS.  
STUDY EFFECTIVENESS AND SURVIVABILITY OF PATRIOT, HEL, AAH AND HELLFIRE.  
PREPARE AIR-TO-AIR/AIR-TO-SURF JOINT MUNITIONS EFFECTIVENESS MANUALS.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

AMSA MISSION CAPABILITIES INCLUDE PERFORMING INDEPENDENT TEST DESIGN AND OVERALL EVALUATION FOR DECISIONS ON MAJOR, DESIGNATED NON-MAJOR, AND SELECTED OTHER SYSTEMS, PROVIDING OVERVIEW OF LIFE CYCLE SURVEILLANCE PROGRAMS FOR MATERIEL SYSTEMS IN INVENTORY; PROVIDING WEAPON SYSTEM EFFECTIVENESS ESTIMATES FOR COST AND OPERATIONAL EFFECTIVENESS ANALYSES; PROVIDING SYSTEMS ANALYSIS SUPPORT TO DARCOM MAJOR SUBORDINATE COMMANDS AND PROJECT/PRODUCT MANAGERS; MAINTAINING DIRECT CONTACT WITH ARMY MATERIEL USERS IN THE FIELD; SERVING AS THE DARCOM FIELD ACTIVITY FOR ADMINISTERING THE JOINT TECHNICAL COORDINATING GROUP FOR MUNITIONS EFFECTIVENESS, JTCC/ME, AND PERFORMING LOGISTICS AND READINESS RELATED ANALYSIS.

INSTALLATION: MATERIEL TESTING DIRECTORATE

ABERDEEN PROV.GP., MD

DIR. COL. CHARLES W. BINNEY

ASSOC. DIR. DONALD RESCH

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	41.895	49.898
TOTAL PROCUREMENT	18.044	20.254
TOTAL O&M	0.950	1.045
TOTAL OTHER	6.825	7.508
TOTAL ANNUAL LAB	67.214	78.705
 TOTAL INHOUSE	 64.422	 75.530
TOTAL INHOUSE RDT&E	39.887	48.162
ANNUAL OPERATING COST	26.627	31.806

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON-
				PROF
MILITARY	215	0	24	191
CIVILIAN	993	7	229	764
TOTAL	1208	7	258	955

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
22865	724.817	4.851	269.547	998.215	17.245	50.649

## ...MISSION

PLAN CDT AND RPT TESTS OF WPNS WPN SYS RKTS & GM SYS FIRE CON & TGT ACQ EQUIP ITEMS OF AMMO & MUN COMPONENTS CBT VEHIS OTHER AUTO MAT GEN EQUIP. PROV COR SVCS FOR PROC OF ARMOR PLATE FOR ALL DARCOM INSTLS & ACTIVITIES PROV SUPPORT SVCS TO APG ELEMENTS & SUPPORT COMMANDS.

## ...CURRENT IMPORTANT PROGRAMS

XM1 TANK SYSTEM INCL VULNERABILITY

120MM GUN/AMMO PROGRAM

INFANTRY FIGHTING VEHICLE

DIVADS

XM1E1 TANK SYSTEM INCL VULNERABILITY

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST AREA 68700 ACRES RANGE TO LAND IMPACT 26000M RANGE TO WATER IMPACT 80000 41 MILES OF AUTMV CRS INCL 27 SP ENGR TEST CRS & OBSTACLES VAR OF ENVIR OR COND EQUIP SP CHAMBERS FOR SUBJECTING EQUIP TO DUST SALT SPRAY OR SOLAR RADN ISOLATED VIBRATION TEST FAC WHICH PERMITS SHAKING EXPLO EQUIP SIMULTANEOUSLY WITH TEMP CONDITIONING FAC FOR CONTROLLED TESTS OF ELEC CON & GUIDANCE EQUIP FREQ SOURCE WHICH PERMITS TESTING ALL TYPES OF MAT IN PRESENCE OF A HIGH INTENSITY ELEC MAGNETIC RADN SP FAC FOR TEST OF ARMOR PLATE SP VEL & TGT EQUIP IS AVAIL FOR OBSERVATIONS DURING RAPID FIRE AS IS RKT TRACK FOR CONTROLLED TERMINAL BALLISTIC TESTS FAC AVAIL FOR TESTS OF SP ELECTRONIC & FIRE CON EQUIP & RELATED SYS & COMPONENTS. PULSE RADIATION FAC AVAIL FOR USE IN RADIATION TESTING NUCLEAR EFFECTS. SIMULATION REACTOR TECHNOLOGY & RADIATION PHYSICS.

INSTALLATION: MEDICAL BIOENGINEERING R&amp;D LABORATORY

FT. DETRICK, MD.

CDR. COL. JOHN N. ALBERTSON JR

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	8.565	12.090
TOTAL PROCUREMENT	0.001	0.000
TOTAL OEM	0.065	0.000
TOTAL OTHER	1.387	1.059
TOTAL ANNUAL LAB	10.018	18.149
 TOTAL INHOUSE	 5.137	 5.909
TOTAL INHOUSE RDT&E	4.174	4.850
ANNUAL OPERATING COST	1.449	2.745

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	36	4	21	15
CIVILIAN	102	15	87	65
TOTAL	138	19	58	80

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	45.108	27.800	34.108	106.511	8.274	8.176

## ...MISSION

CONDUCTS ENG RSCH & DEVELOPMENT OF MILITARY MEDICAL EQUIPMENT  
 CONDUCTS THE SURGEON GENERAL'S RDT&E PROGRAM IN INTEGRATED PEST MGT  
 CONDUCTS ENVIRONMENTAL OCCUPATIONAL HLTH BASIC & APPLIED RSCH ON CHGMCLS  
 CONDUCTS LIFE CYCLE SYSTEM MGT OF MED, DENTAL & PEST MGT MATERIELS

## ...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF FIELD MEDICAL DEVICES AND EQUIPMENT  
 PEST MGT RDT&E INCLUDING METHODS, MATERIALS, EQUIPMENT AND CONCEPTS  
 DEVELOPMENT OF MEDICAL EQUIPMENT FOR CHEMICAL DEFENSE  
 OCCUPATIONAL HLTH RSCH: SMOKE OBSC WPN SYS, SYN FUEL, FLD SAN & WATER  
 DEVELOP ENVIRONMENTAL QLTY & OCCUP HLTH CRITERIA ON MIL CHEMICALS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

DESIGN, DEVELOP & FABRICATE PROTOTYPE & TEST MODELS OF MILITARY MED MAT  
 PRODUCE LIMITED QUANTITIES OF MED MAT FOR URGENT MILITARY REQUIREMENTS  
 DESIGN, DEVELOP & FABRICATE PEST MGT EQUIP AND SYSTEMS  
 DESIGN, DEVELOP & FABRICATE PROTOTYPE & TEST MODELS OF MIL DENTAL MAT  
 PERFORM HLTH & ECOLOGICAL EFFECTS & RESEARCH ON ENVIRON POLLUTANTS  
 PERFORM PILOT PLANT RSCH ON WATER & WASTEWATER FOR FIELD ARMY USE.

INSTALLATION: MEDICAL R & D COMMAND

FT. DETRICK, MD.

CDR. MG GARRISON RAPMUND

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	8.252	8.845
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.278	0.300
TOTAL OTHER	1.978	2.782
TOTAL ANNUAL LAB	5.508	6.427
 TOTAL INHOUSE	 5.508	 6.427
TOTAL INHOUSE RDT&E	8.252	8.845
ANNUAL OPERATING COST	8.530	8.645

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PRDS	TOTAL PROF	NON- PROF
MILITARY	59	22	48	11
CIVILIAN	101	1	2	99
TOTAL	160	28	50	110

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
1	0.000	86.887	0.000	86.887	0.560	0.619	

...MISSION

ADMINISTRATION AND COORDINATION OF THE MEDICAL RDT&E PROGRAM  
PROGRAM LIMITED TO UNIQUE MILITARY PROBLEMS WITHIN US AND OCONUS  
SERVES AS AN ADMINISTRATIVE HEADQUARTERS FOR THE ARMY MEDICAL  
DEPARTMENT

...CURRENT IMPORTANT PROGRAMS

CARE OF THE WOUNDED  
PREVENTION AND CONTROL OF INFECTIOUS DISEASES  
ENHANCEMENT OF MILITARY PERFORMANCE  
PROTECTION AGAINST MILITARY ENVIRONMENTAL HAZARDS  
MEDICAL DEFENSE AGAINST CHEMICAL WARFARE\$

...FUNCTIONS/EQUIPMENT/CAPABILITIES

SERVES AS AN ADMINISTRATIVE HEADQUARTERS FOR THE ARMY  
MEDICAL DEPARTMENT.

INSTALLATION: MEDICAL RESEARCH INSTITUTE CHEMICAL DEFENSE ABERDEEN PROV. GR., MD

CDR. COL. FRANKLIN H. TOP JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	13.553	35.128
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.031	0.020
TOTAL OTHER	1.766	2.418
TOTAL ANNUAL LAB	15.350	87.561
 TOTAL INHOUSE	 8.974	 11.481
TOTAL INHOUSE RDT&E	7.177	9.048
ANNUAL OPERATING COST	1.680	1.850

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	75	27	44	81
CIVILIAN	145	15	52	98
TOTAL	220	42	96	124

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
81	86.426	15.845	98.429	150.200	9.246	4.260

...MISSION

FUNDAMENTAL RESEARCH ON MECHANISMS OF ACTION (CW AGENTS & ANTIDOTES)  
DEVELOPMENT OF PRETREATMENT & ANTIDOTE DRUGS (AGAINST CW AGENTS)  
DEVELOP & EVALUATE PREVENTION, RESUSCITATION, TREATMENT & MANAGEMENT  
METHODS FOR CHEMICAL CASUALTIES AND ASSIST IN THEIR IMPLEMENTATION

...CURRENT IMPORTANT PROGRAMS

MEDICAL CHEMICAL DEFENSE SCIENCE BASE/MECHANISM OF ACTION AGENTS/DRUGS  
DEVELOP SOLDIER CW AGENT ANTIDOTES & PRETREATMENT REGIMEN  
DEVELOP BIOMEDICAL MODELS TO EVALUATE DRUG EFFICACY  
EVALUATE BEHAVIORAL/PERFORMANCE DECREMENTS FROM CW AGENTS/ANTIDOTES  
DEVELOP METHODS FOR MGT & TREATMENT OF MASS CASUALTIES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MODERN 7000 SQ FT ANIMAL HOLDING FACILITY  
2400 TECH LIBRARY HOLDINGS & DIVERSE NUMBER OF SCIENCE DATA BASES  
COMPLETE VIDEO PRODUCTION FACILITY  
MEDICAL MAINTENANCE FACILITY  
RADIOISOTOPE ANALYSIS  
BEHAVIORAL TESTING LABORATORY  
LIQUID, GAS, COLUMN AND AFFINITY CHROMATOGRAPHY  
ELECTROPHORESIS, SPECTROSCOPY, FLUOROMETRY AND SPECTROPOLARIMETRY  
GC MASS SPECTROMETRY AND ELECTRON SPIN RESONANCE  
AMINO ACID ANALYSIS AND PEPTIDE SEQUENCING  
TISSUE CULTURE  
ELECTRON MICROSCOPY.

INSTALLATION: MEDICAL RSCH INST OF INFECTIOUS DISEASES

FT. DETRICK, MD.

CDR. COL. RICHARD F. BARQUIST

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	0.000	18.359
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.000	7.863
TOTAL ANNUAL LAB	0.000	25.722
 TOTAL INHOUSE	0.000	19.447
TOTAL INHOUSE RDT&E	0.000	12.084
ANNUAL OPERATING COST	0.000	7.515

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	820	45	97	223
CIVILIAN	210	84	77	188
TOTAL	580	79	174	356

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
48	80.848	19.820	209.699	810.862	17.085	8.078	

...MISSION

PERFORMS STUDIES ON THE PATHOGENESIS, DIAGNOSIS, PROPHYLAXIS, TREATMENT AND EPIDEMIOLOGY OF NATURALLY OCCURRING INFECTIOUS DISEASES OF MILITARY IMPORTANCE WITH EMPHASIS ON PROBLEMS ASSOCIATED WITH THE MEDICAL DEFENSE AGAINST BIOLOGICAL AGENTS.

...CURRENT IMPORTANT PROGRAMS

IMPLEMENTED NEW MEDICAL DEFENSE STUDIES ON THE SMALL MOLECULAR WEIGHT TOXINS WITH PARTICULAR EMPHASIS ON T-2 MYCOTOXINS  
RECENT INFORMATION REVEALS INCOMPLETE PROTECTION OF KILLED VIRAL VACCINES (RVF AND VEE) TO VIRULENT VIRUS CHALLENGE BY AEROSOL ROUTE  
METHODOLOGY DEVELOPED FOR PRODUCTION, PURIFICATION AND PARTIAL CHARAC-

...FUNCTIONS/EQUIPMENT/CAPABILITIES

COMPLETED GLP TOXICITY STUDY OF RIBAVIRIN AND FOUND THAT THE DRUG'S IMPACT ON BONE MARROW HAS AN ACCEPTABLE RISK/BENEFIT RATIO IN TREATMENT OF HIGH HAZARD VIRUS INFECTIONS SUCH AS LASSA FEVER  
800 LITERS OF HORSE PLASMA HAVE BEEN COLLECTED AND PROCESSED AND CONTAIN HIGH LEVELS OF NEUTRALIZING ANTIBODY TO ALL SEVEN TYPES OF BOTULISM TOXIN. DESPECIATING PROCEDURES WILL BE UNDERTAKEN IN ORDER TO HAVE AVAILABLE A SUPPLY OF NON-SENSITIZING GLOBULIN FOR INTRAVENOUS ADMIN. THIS LABORATORY WAS ORGANIZED INTACT AS A SEPARATE UNIT EFFECTIVE 1 OCTOBER 81.

## INSTALLATION: MISSILE LABORATORY

REDSTONE ARSENAL, AL.

CDR. MAJ. GEN. ROBERT L. MOORE

DIR. DR. WILLIAM C. MCCORKLE

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	198.106	162.022
TOTAL PROCUREMENT	42.668	59.115
TOTAL O&M	28.052	20.921
TOTAL OTHER	21.418	29.788
TOTAL ANNUAL LAB	285.289	271.796
 TOTAL INHOUSE	 88.601	 85.388
TOTAL INHOUSE RDT&E	52.318	50.390
ANNUAL OPERATING COST	17.884	19.598

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	44	0	27	17
CIVILIAN	1281	55	680	601
TOTAL	1275	55	657	618

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11000	664.000	224.000	251.500	1139.500	165.815	102.000

## ...MISSION

MISSION. MNGB & CONDUCT RSCH, EXP & ADV DEV FOR ASSGN MTL; PROVIDE S&E SPT TO OTHER ACTIVITIES; PLANS, DIRECTS & CONDUCTS RSCH STUDIES & PRGMS TO ADV SYS ENGR & TESTING TECHNOLOGY; PROVIDES CENTRAL ENGR BASE FOR DESIGN & MANUFACTURE OF PROTOTYPE SYS & COMPONENTS.

## ...CURRENT IMPORTANT PROGRAMS

DEVELOPING CONCEPTS FOR: SINGLE PENETRATOR KINETIC ENERGY (SPIKE) PKT, FIBER OPTICS GUIDED MISSILE, ARTILLERY ROCKET TECH, OVER ARMOR TECHNOLOGY SYNTHESIS AND CARBON DIOXIDE LASER BEAMRIDER CONCEPT.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

LAB IS EQUIPPED TO STUDY PROBLEMS IN PROP, AERO, G&C & STRUCTURES. MAJOR FAC IS MCNORMAN LAB WHICH HOUSES MAJORITY FACILITY. SOME OF UNIQUE FAC ARE: ADV SIM CTR; A COMPUTER COMPLEX SURROUNDED PERIPHERALLY BY 3 ENVIR EFFECTS SIMULATORS; MSL COMPUTER SOFTWARE/HWD CTR; SIG EVAL ENVIR CHAMBER; ARMY MSL OPTICAL RANGE DESIGNED TO MEASURE LASER RADAR SIG. MAINTAINS AND OPERATES 7 MAJOR TEST AREAS WHICH ENCOMPASS FLIGHT STATIC, ENVIRONMENTAL & FUNCTIONAL TEST; STATE-OF-THE-ART FACILITIES & EQP SUCH AS LASER TRACKERS & ELECTRO-MAGNETIC RADAR SENSORS, ENGR DESIGN & DEV OF CORRECTIONS TO DESIGN DEFICIENCIES IN FIELDED WPN SYSTEMS. PERFORMS ARMY LEAD LAB FUNCTION IN HIGH POWER/ENERGY LASER RSCH & TECH & MSL RSCH. FAC FOR MECH, ELECT & ELEC FABRICATION & ASSY, & HYBRID MICRO-CIRCUITRY DESIGN ARE AVAILABLE. SMOKE CHARACTERIZATION FACILITY IS ALSO AVAILABLE.

INSTALLATION: MOBILITY EQUIP R &amp; D COMMAND

FT. BELVOIR, VA.

CDR. COL. THEODORE VANDER ELS

TECH. DIR. MR. T. W. LOVELACE

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	91.887	80.594
TOTAL PROCUREMENT	235.756	290.610
TOTAL O&M	82.209	84.622
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	859.852	405.826
 TOTAL INHOUSE	 50.549	 51.387
TOTAL INHOUSE RDT&E	30.112	26.765
ANNUAL OPERATING COST	14.287	16.600

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	74	0	19	55
CIVILIAN	1219	16	279	940
TOTAL	1298	16	298	995

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLION \$)	
	I.AB	ADMIN	OTHER		REAL PROP	EQUIP
1064	488.653	826.499	209.879	1025.081	50.706	55.891

## ...MISSION

PROVIDE THE ARMY WITH NEW AND IMPROVED COMBAT SUPPORT AND COMBAT SERVICE SUPPORT EQUIPMENT THROUGH RESEARCH, DEVELOPMENT, ENGINEERING, INITIAL ACQUISITION, AND SUBSEQUENT ACQUISITION SUPPORT IN MOBILITY/COUNTER-MOBILITY, ENERGY, SURVIVABILITY, AND LOGISTICS EQUIPMENT SYSTEMS.

## ...CURRENT IMPORTANT PROGRAMS

ASSAULT BRIDGING

FACILITIES INTRUSION DETECTION SYSTEM

PETROLEUM DISTRIBUTION SYSTEMS AND WATER SUPPLY EQUIPMENT

COUNTERMINE EQUIPMENT

ELECTRIC POWER FUEL CELLS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

ACCOMPLISH RSCH, DEV, & ACQUISITION OF MAT FOR MIL SYS OF BARRIERS, BRDG O STRUCS, CNTRMINE, FIELD FORTIFICATIONS, CAMOUFLAGE, PHYSICAL SECURITY. TUNNEL DETECTION, TOPOGRAPHY-ENGRG ONLY, FUELS & LUBES, FUEL HNDLG EQUIP, ELEC POWER GENERATION & DISTRIBUTION, ENVIRON CONTROL, WATER & WASTE MGT, MAT HNDLG & SUPPLY DISTRIB, TRANSPORT-MARINE & RAIL EQUIP, AND CONSTRUCTION EQUIP. FACILITIES INCLUDE MINE FIELD TEST LANES, SENSOR TEST AREA, RDO FREQ ANECHOIC CHAMBER, CAMOUF EVAL & REF CTR, FUEL CELL & BATTERY TEST STAS, FLUID STROKING TEST CHAMBER, FIRE SUPPRESSION CHAMBER, ELECTRIC PROPULSION SIM, BRIDGE TEST HANGER, MOBILE STRESS ANALYSIS VAN, TRK STABILITY TILT TABLE, VH TEST TRACKS, SHOCK & VIBRATION DYNAMIC SIM, ENVIRON SIM, MATERIALS RSCH LAB, EMI SIN, COMPT CTR, STILL & MOTION PIC SPT, RSCH & DEV MODEL FABRICATION SHOPS, CALIB & INSTRUMENTATION.

INSTALLATION: NATICK R&amp;D LABORATORIES

NATICK, MA.

CDR. COL. JAMES S. HAYES

ACTG. TECH. DIR. COL. GEORGE R. RUBIN

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981		1982
	(ACTUAL)	(ACT + EST)	
TOTAL RDT&E	42.286		40.623
TOTAL PROCUREMENT	2.046		0.000
TOTAL O&M	15.647		19.662
TOTAL OTHER	8.849		4.198
TOTAL ANNUAL LAB	63.778		64.483
 TOTAL INHOUSE	 88.818		 40.791
TOTAL INHOUSE RDT&E	26.471		27.498
ANNUAL OPERATING COST	7.820		8.650

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		TOTAL PROF	NON- PROF
		PHDS			
MILITARY	104	6		27	77
CIVILIAN	1087	74		428	659
TOTAL	1191	80		455	736

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
2466	558.160	65.900	418.128	1087.188	28.214	20.889

## ...MISSION

CONDUCT SCIENTIFIC R&D TO SUSTAIN AND PROTECT MILITARY PERSONNEL UNDER ALL CONDITIONS. DESIGN/DEVELOP FOOD/FOOD SERVICE SYSTEMS, CLOTHING, AIR DELIVERY EQUIPMENT. PERFORM ILS FUNCTION. FIRST PRODUCTION BUY/FIELDING OF NEW ARMY MANAGED ITEMS. TECH/ENG SPT TO PROCUREMENT AGENCIES.

## ...CURRENT IMPORTANT PROGRAMS

AIRDROP SYSTEMS AND EQUIPMENT TECHNOLOGY AND DEVELOPMENT  
 CLOTHING, EQUIPMENT TECHNOLOGY AND DEVELOPMENT  
 ANALYSIS AND DESIGN OF MILITARY FEEDING SYSTEMS  
 SUBSISTENCE TECHNOLOGY  
 TACTICAL RIGID-WALL SHELTERS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

HIGH POWER LINEAR ACCELERATION. BACTERIOLOGY LAB EQUIPMENT FOR INVESTIGATION OF PATHOGENIC MICROORGANISMS. HIGH RESOLUTION MASS SPECTROMETER FOR ANALYSIS OF VOLATILE COMPOUNDS. FEBETRON MACHINE USED AS A RADIATION SOURCE FOR PULSE RADIOLYSIS. PILOT PLANT TO STUDY DATA ON CONVERTING CELLOLOSE TO GLUCOSE ENZYMATIALLY. DYING AND FINISHING LAB FOR STUDIES TEXTILES. COMPUTER GENERATED SYSTEM OF CLOTHING PATTERNS TO OUTPUT. COMPLETE TARIFF OF SIZES FROM ONE MASTER. CLIMATIC TEST CHAMBERS W/TEMPS -57C TO +74C WITH WIND AND RAIN. FLAME PROTECTION LAB AND FACILITY INCLUDING OUTDOOR FIRE PIT. UNIVAC 1106 COMPUTER W/DISKPACS, TAPE DRIVES AND INPUT/OUTPUT EQUIPMENT. AIRCRAFT ROLLER CONVEYER TEST FACILITY, DROP TEST FACILITY, 40X40 FT RAINCOURT, EXPERIMENTAL KITCHEN, SENSORY EVALUATION LAB, HORIZONTAL IMPACT TESTING MACHINE.

INSTALLATION: NIGHT VISION & ELECTRO OPTICS LABORATORY FT. BELVOIR, VA.

DIR. DR. LOUIS M. CAMERON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	47.159	65.759
TOTAL PROCUREMENT	162.112	145.082
TOTAL O&M	1.746	1.800
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	211.017	212.091
TOTAL INHOUSE	25.282	27.729
TOTAL INHOUSE RDT&E	20.449	22.929
ANNUAL OPERATING COST	2.156	2.058

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	32	0	8	29
CIVILIAN	462	86	208	254
TOTAL	494	86	211	288

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
88	151.800	75.800	0.000	227.600	82.600	26.036	

...MISSION

NV&EOL IS RESPONSIBLE FOR PROVIDING THE ARMY WITH AN ELECTRO-OPTICAL CAPABILITY THAT WILL ALLOW IT TO OPERATE WITH DAYLIGHT EFFICIENCY AT NIGHT AND UNDER CONDITIONS OF LIMITED VISIBILITY. THE SYSTEMS DEVELOPMENT PROGRAM IS STRUCTURED AROUND A STRONG TECHNOLOGY BASE

...CURRENT IMPORTANT PROGRAMS

LIQUID PHASE EPITAXY FOR COMMON MODULE DETECTORS

AUTOMATION OF FLIR SENSORS

SECOND GENERATION THERMAL IMAGING

AVIATORS NIGHT VISION SYSTEM

SURVEILLANCE TARGET ACQUISITION RADAR FOR TANK LOCATION & ENGAGEMENT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR FACILITIES INCLUDE: NIGHT VISION SYSTEM LAB IR DETECTOR FABR & ANALYSIS FACILITY SURFACE RESEARCH FACILITY FOCAL PLANE ARRAY TEST FACILITY IR OPTICAL TEST FACILITY IMAGE INTENSIFIER TUBE TESTING FACILITY SEMI-CONDUCTOR MATERIALS RESEARCH FACILITY ELECTRONICS TEST FACILITY INTERACTIVE IMAGE PROCESSING FACILITY LASER RANGES 3D MULTI SPECTRAL SIMULATOR SCIENTIFIC COMPUTER CENTER FIRING TEST RANGE AND E-O/IR IMAGE EVALUATION FACILITY.

INSTALLATION: RESEARCH INST FOR BEHAVIORAL & SOCIAL SCI ALEXANDRIA, VA.

CDR. COL. L. MEALE COSBY

TECH. DIR. DR. JOSEPH ZEIDNER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	27.225	83.180
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.003	0.985
TOTAL ANNUAL LAB	28.228	84.165
 TOTAL INHOUSE	16.046	17.857
TOTAL INHOUSE RDT&E	15.048	16.872
ANNUAL OPERATING COST	5.063	6.198

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	88	1	84	1
CIVILIAN	882	160	242	90
TOTAL	865	161	276	91

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL. PROP	EQUIP
0	46.110	2.559	7.245	55.914	0.000	1.854

...MISSION

TO MAXIMIZE COMBAT EFFECTIVENESS THROUGH RESEARCH IN THE ACQUISITION, DEVELOPMENT AND UTILIZATION OF SOLDIERS IN MILITARY SYSTEMS. NINE CONUS FIELD UNITS AND ONE IN EUROPE. LIAISON OFFICES AT TRADOC, FORSCOM, & IN LONDON SUPPORT IN-HOUSE RESEARCH PROGRAM MANAGED BY 8 LABS

...CURRENT IMPORTANT PROGRAMS

MANPOWER ACCESSION AND RETENTION SYSTEMS  
COMBAT SKILL ACQUISITION, RETENTION, AND TRANSFER  
SIMULATION AND TRAINING DEVICES  
COMBAT VEHICLE IDENTIFICATION  
BASIC SKILLS INSTRUCTIONAL SYSTEMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NINE CONUS FIELD UNITS AND ONE IN EUROPE. 9 CONUS UNITS ARE AT FTS BENNING, BLISS, KNOX, SILL, HOOD, LEAVENWORTH, RUCKER, BEN HARRISON, & PRESIDIO OF MONTEREY. IN-HOUSE EXPERIMENTAL FACILITIES INCLUDE LABORATORY AREA. ARMY OWNED IN-HOUSE COMPUTERS PERMIT WITHIN THE LABS, REAL TIME EXPERIMENTATION, GAMING, AND SIMULATION. ADDITIONAL TERMINAL LINES TO EXTERNAL COMPUTERS PROVIDE FLEXIBILITY. EXPERIMENTAL PROGRAM PERMITS A WIDE RANGE OF LAB OPTIONS TO TEST HUMAN PERFORMANCE HYPOTHESES UNDER SIMULATED OPERATIONAL CONDITIONS INCLUDING A COMMAND POST IN SIMULATED TACTICAL SITUATIONS .

INSTALLATION: RSCH INSTITUTE OF ENVIRONMENTAL MEDICINE                    Natick, MA.

CDR. LT. COL. (P) ELIOT J. PEARLMAN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	4.160	4.037
TOTAL PROCUREMENT	0.000	0.000
TOTAL C&M	0.045	0.000
TOTAL OTHER	1.895	2.122
TOTAL ANNUAL LAB	5.600	6.159
 TOTAL INHOUS*	5.206	5.896
TOTAL INHOUSE RDT&E	8.766	8.774
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	81	6	89	42
CIVILIAN	102	19	58	44
TOTAL	183	25	97	86

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	60.421	18.793	28.647	107.861	3.713	4.350

...MISSION

CONDUCT RSCH TO DETERMINE EFF OF HEAT, COLD, HIGH TERRESTRIAL ALT & WORK ON SOLDIER'S LIFE PROCESSES, PERF & HLTH. CONDUCTS RSCH IN THE PHYSIOLOGICAL ASPECTS & HEALTH EFFECTS OF ARMY PHYSICAL FITNESS TRAINING. ASSIST NAVAL LABS IN DEVELOPMENT OF PERSONAL CLOTHING AND EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

MED SCREEN FOR PERS 0/40 YRS OLD PRIOR TO PARTICIPATION IN PHYS TNG/TSTG ASSESS WORK LIMITS IMPOSED ON SOLDIER BY SNGL/MLTPL PROT REGMNS TO CW BIOMED IMPACT OF MIL CLTHNG & EQ USGN INCL SELECTION OF CREW COMPART ENV INVIGNS DIRECTED TWD VENTILATORY RSPNSE TO HYPOXIA/PRE-SEL FOR H/A MSNS STRUC & FNCTNL ALTNs IN CELLS, TISSUES & ORGANS IND BY EXP TO ENV EXTRMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT RSCH & PROVIDE GUIDANCE TO DESIGNERS, ENGINEERS, TACTICIANS, PLANNERS & PHYSICIANS ON MIL PERF & CASUALTY PREVENTION & TRTMNT IN EXTREME CLIMATES & ENGINEERED ENVIRONS; ADVISE ON HLTH & SAFETY IN MANEUVERS DURING HEAT, COLD, OR HYPOXIC STRESS & RAPID AIR TRANSLOCATION. THE MAJOR RQ & FAC CA ABILITIES OF THE LAB INCLUDE TWO LG ALT CHMBRS, SMALL CLIMATIC CHMBRS, AAALAC ACC ANIMAL CARE FAC'S, ELECTRON MICROSCPY, UNDERWATER RSCH POOL, COPPER MANIKINS & DIVERSE PHARMACOLOGICAL & PSYCHOLOGICAL MEASURING EQUIPMENT. THE INSTITUTE MAINTAINS A FIELD FACILITY ON THE SUMMIT OF PIKES PEAK, COLORADO.

INSTALLATION: SIGNALS WARFARE LABORATORY

VINT HILL, VA.

CDR/DIR. MR. H. S. HOVEY JR      ACTING DEPTY DIR. W. S. HAYDEN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	87.225	47.049
TOTAL PROCUREMENT	121.186	55.560
TOTAL O&M	2.022	2.456
TOTAL OTHER	0.000	0.000
TOTAL ANNUAL LAB	160.433	105.065
TOTAL INHOUSE	8.667	10.284
TOTAL INHOUSE RDT&E	6.645	7.778
ANNUAL OPERATING COST	0.402	0.450

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	71	0	8	68
CIVILIAN	171	5	59	112
TOTAL	242	5	67	175

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
10	3.986	29.145	8.963	37.044	8.600	5.100	

...MISSION

RESEARCH DESIGN DEVELOPMENT EVALUATION ANALYSIS LOGISTICAL INTEGRATION FIRST ARTICLE PRODUCTION SUCCESSFUL FIELDING AND PRODUCT IMPROVEMENT OF SIGNALS. INTELL/ELECTRONIC WARFARE SYS AND THE DESIGN OF SIGNAL SECURITY DEVICES AND TECH TO MEET ARMY AND DIRECTED NATIONAL REQMTS.

...CURRENT IMPORTANT PROGRAMS

AN/TLG-17A TACTICAL JAMMER  
AN/MLQ-84 TAC JAM  
EXPENDABLE JAMMERS  
AN/ALQ-151 QUICK FIX  
MANPACK RADIO DF SET

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE US ARMY SIGNALS WARFARE LABORATORY IS LOCATED AT VINT HILL FARMS STATION WARRENTON VIRGINIA IN A FACILITY UNIQUELY SUITED TO MISSION. THE LABORATORY CONSISTS OF APPROXIMATELY 4000 SQUARE FEET WITH A COMPUTERIZED SIGNAL PROCESSING FACILITY (CONSISTING OF A CPU RECORDS ANAL) FOR SYS SOFTWARE VERIFICATION AND VALIDATION R&D SOFTWARE DEV AND SUP ARE USED FOR DESIGN AND TEST OF EQUIPMENT IN A REAL TIME ENVIRONMENT. THE LAB IS STAFFED WITH ELECTRONIC ENGINEERS AND TECH SIGNALS ANALYSTS OPERATION RESEARCH ANALYSTS INTEGRATED LOGISTICS SUPPORT PERSONNEL PRODUCT AND QUALITY ASSURANCE TECHNICIANS AND PRODUCTION ENGINEERS TO PROVIDE FOR TECHNICALLY SOUND MILITARIZED AND FULLY SUPPORTABLE AND INTER/INTRA-OPERATABLE COMMUNICATIONS AND ELECTRONICS SYSTEM AND EQUIPMENT.

## INSTALLATION: TANK-AUTO COMMAND LABORATORIES

WARREN, MI.

CDR. BG C. M. MATHEWS JR

TECH. DIR. DR. E. N. PETRICK

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	110.840	110.007
TOTAL PROCUREMENT	115.805	366.465
TOTAL O&M	11.405	8.238
TOTAL OTHER	0.949	1.816
TOTAL ANNUAL LAB	287.999	486.021
 TOTAL INHOUSE	 36.525	 39.418
TOTAL INHOUSE RDT&E	20.447	21.639
ANNUAL OPERATING COST	5.878	5.867

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	84	1	25	9
CIVILIAN	548	14	290	253
TOTAL	577	15	315	262

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
11	258.652	33.828	109.783	402.213	38.294	148.000

## ...MISSION

RESPONSIBLE FOR ACCOMPLISHING DESIGN, DEVELOPMENT, ACQUISITION AND INITIAL DEPLOYMENT OF ASSIGNED WEAPONS/EQUIP SYSTEMS. CONDUCT AND MANAGE RESEARCH, PERFORM PROCUREMENT AND QUALITY ASSURANCE THRU DEVELOPMENT. PERFORM RELIABILITY-MAINTAINABILITY ASSESSMENT.

## ...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF DYNAMIC ANALYSIS AND DESIGN SYSTEM VEHICLE MODELING  
 STANDARDIZED AUTOMATIC OPTICAL FIRE SUPPRESSION AND DETECTION COMPONENTS  
 SECURE LIGHTING IMPLEMENTATION INTO ALL COMBAT VEHICLES  
 ARMORED COMBAT VEHICLE SCIENCE AND TECHNOLOGY PLAN  
 FULL SCALE DEV OF FIELD ARTILLERY AMMUNITION SUPPORT VEHICLE (FAASV)

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

VEHICLE BRAKE DYNAMOMETER; ENGINE AND TRANSMISSION TEST CELLS  
 VEHICLE SUBSYSTEM INTEGRATION, VEHICLE MOTION SIMULATOR  
 ANALYTICAL PREDICTION OF MILITARY VEHICLE PERFORMANCE  
 VEHICLE SIGNATURE MEASUREMENT CAPABILITY  
 SIX DEGREE OF FREEDOM SIMULATOR. VEHICLE COMPONENT EVALUATION.  
 SCIENTIFIC AND ENGINEERING COMPUTER NETWORK (SENET) FOR  
 COMPUTER AIDED DESIGN (CAD) SERVICES. METAL ANALYSIS WITH  
 MICROPROBE ELECTRON MICROSCOPE ANALYZER AND TECHNIQUES  
 DEVELOPMENT OF IMPROV' ARMOR WELDING, FABRICATION AND APPLICATION  
 TECH'NES. LOW TEMP. TURE SHOCK AND VIBRATION TEST FACILITIES  
 VEHICLE DYNAMIC SIMULATION FACILITY; IMAGE PROCESSING CAPABILITY  
 HOLOGRAPHIC CAPABILITY FOR LARGE STRUCTURES

INSTALLATION: TROPIC TEST CENTER

FT. CLAYTON, C.Z.

CDR. COL. RICHARD P. BARRERE      TECH. DIR. MR. FRANK S. MENDEZ

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL PDT&E	8.140	8.524
TOTAL PROCUREMENT	0.054	0.015
TOTAL O&M	0.000	0.013
TOTAL OTHER	1.805	1.488
TOTAL ANNUAL LAB	4.499	5.040
 TOTAL INHOUSE	4.414	4.940
TOTAL INHOUSE RDT&E	8.075	8.424
ANNUAL OPERATING COST	0.440	0.450

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PIDS	TOTAL PROF	NON- PROF
MILITARY	74	0	14	60
CIVILIAN	60	8	26	84
TOTAL	134	3	40	94

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
2625	18.000	85.925	88.556	142.481	0.874	8.098	

...MISSION

PLAN, CONDUCT AND REPORT ON ENVIRONMENTAL PHASES OF DEVELOPMENT TEST II AND OTHER DEVELOPMENTAL TYPE TESTS. PROVIDE ADVICE AND GUIDANCE ON TESTS AND EVALUATION MATTERS TO MATERIEL DEVELOPERS, MATERIEL PRODUCERS, OTHER SERVICES AND PRIVATE INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

TEMPERATE BATTLE DRESS UNIFORM

120MM CARTRIDGE

RESEARCH AND DEVELOPMENT INSTRUMENTATION PROGRAM

INDEPENDENT LABORATORY IN-HOUSE RESEARCH

TEST METHODOLOGY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST FACILITIES AND LABORATORIES WITH INSTRUMENTS AND EQUIPMENT FOR CONDUCTING TROPIC TESTS OF DOD MATERIEL IN THE NATURAL ENVIRONMENT TO INCLUDE ELECTRONICS, HUMAN FACTORS, CHEMICAL, MICROBIOLOGICAL, MATERIALS, SOILS, AUDIO-VISUAL, AND DATA ANALYSIS LABORATORIES.

OTHER TEST RESOURCES CONSIST OF FIRING RANGES; NATURAL TERRAIN MOBILITY COURSES; AMMO TEST STORAGE AREAS; JUNGLE, GRASS AND COASTAL MATERIEL EXPOSURE SITES; JUNGLE RADIO RANGING SITES; POL TANK FARM; MAN PACK PORTABILITY COURSE; CALIBRATED SEISMIC DETECTION AND CHEMICAL TEST GRIDS; 2583 ACRES OF BROADLEAF EVERGREEN TREES, SEMIDEciduous TREES, MARSHLAND, AND GRASSLAND; CORAL REEFS; AND FLAT AND HILLY TERRAIN CONTAINING ALL TYPES OF TROPIC VEGATATION.

INSTALLATION: WALTER REED ARMY INSTITUTE OF RESEARCH

WASHINGTON, D.C.

DIR. COL. PHILIP K. RUSSELL

DEP. DIR. LTC. FRANK J. SODETZ JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	44.050	36.471
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	1.729	1.884
TOTAL OTHER	15.451	18.502
TOTAL ANNUAL LAB	61.230	51.947
 TOTAL INHOUSE	48.620	39.274
TOTAL INHOUSE RDT&E	32.747	28.798
ANNUAL OPERATING COST	8.473	1.802

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	463	160	488	25
CIVILIAN	443	65	266	177
TOTAL	906	225	704	202

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
203	883.274	58.600	0.000	441.874	10.080	18.443

...MISSION

PERFORMS GENERAL MILITARY MEDICINE RESEARCH IN THE AREAS OF COMMUNICABLE DISEASE & IMMUNOLOGY, SURGERY, DRUG DEVELOPMENT, NEUROPSY, GENERAL MEDICINE & PREVENTIVE MEDICINE. SERVES AS COMMAND & CONTROL ELEMENT FOR SPECIAL FOREIGN ACTIVITIES. PLANS & CONDUCTS AMEDD COURSES.

...CURRENT IMPORTANT PROGRAMS

BASIC RESEARCH ON MILITARY DISEASES

MILITARY PSYCHIATRY

MICROWAVE INJURY, PREVENTION & TREATMENT

MEDICAL EFFECTS OF WEAPONS SYSTEMS BLAST OVERPRESSURE

MEDICAL ASPECTS OF CHEMICAL WARFARE DEFENSE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT & FACILITY CAPABILITY OF THE LABORATORY INCLUDES CHEMICAL ANALYTICAL EQUIPMENT, MICROBIOLOGICAL LABS, MICROWAVE EXPOSURE SYSTEM, BEHAVIORAL RESEARCH INSTRUMENTATION AND ELECTRON MICROSCOPES. ADDITIONAL RESEARCH FACILITIES ARE LOCATED IN GERMANY, MALAYSIA, KENYA, BRAZIL, THAILAND AND MARYLAND.

INSTALLATION: WHITE SANDS MISSILE RANGE

WHITE SANDS, N.M.

CDR. MAJ. GEN. ALAN A. NORD      TECH. DIR. DR. RICHARD H. DUNCAN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	154.226	179.038
TOTAL PROCUREMENT	15.806	14.674
TOTAL O&M	8.941	8.580
TOTAL OTHER	14.093	15.547
TOTAL ANNUAL LAB	187.566	213.784
 TOTAL INHOUSE	156.424	180.133
TOTAL INHOUSE RDT&E	131.899	153.886
ANNUAL OPERATING COST	89.520	43.202

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	919	6	719	200
CIVILIAN	2736	57	1048	1688
TOTAL	8655	63	1767	1888

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
3790088	1841.779	578.864	8036.1C7	4955.810	191.591	217.980

...MISSION

TO PROVIDE AND OPERATE A NATIONAL TEST RANGE TO INCLUDE THE DEVELOPMENT AND OPERATION OF THE HELSTF, THE TESTING AND EVALUATION OF ARMY MATERIEL, AND THE OPERATION AND MAINTENANCE OF THE INSTALLATION FOR RANGE TENANTS AND OTHER USERS.

...CURRENT IMPORTANT PROGRAMS

PERSHING II (ARMY)

AIR INTERCEPT MISSILE (AIR FORCE)

ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AIR FORCE)

PATRIOT (ARMY)

HIGH ENERGY LASER SYSTEMS TEST FACILITY (HELSTF) (DOD)

...FUNCTIONS/EQUIPMENT/CAPABILITIES

WSMR, AN ALL-OVERLAND RANGE TESTING COMPLEX, PROVIDES PRECISION TRAJECTORY DATA FROM OPTICAL, ELECTRONIC, ELECTRO-OPTICAL, & RADAR TRACKING STATION REDUCTIONS; TRAJECTORY EVENT DATA FROM LONG FOCAL-LENGTH TRACKING OPTICS & FIXED CAMERAS; AND MISS-DISTANCE DATA FROM TELESCOPES & THE MISS-DISTANCE INDICATOR RADAR FOR MISSILE SYSTEM/SUBSYSTEM TESTING. WSMR ALSO PROVIDES SECURE TELEMETRY, EXPERIMENTAL PAYLOADS & MISSILE COMPONENTS RECOVERY, DOCUMENTARY PHOTOGRAPHY & FILM PRODUCTION, AIR & GROUND TARGET CONTROL, AND GEODETIC SURVEYING OF IMPACT POINTS. OTHER EQUIPMENT & FACILITIES ARE USED TO TEST GUIDANCE, ELECTRO-OPTICAL, & MICRO-WAVE SYSTEMS; DYNAMIC & CLIMATIC ENVIRONMENTS, CHEMICAL, METALLURGICAL, MICROBIOLOGICAL, NUCLEAR, & ELECTROMAGNETIC EFFECTS; AND HAZARDOUS WARHEADS & EXPLOSIVES. WSMR CAN SIMULATE MISSILE SYSTEMS/SUBSYSTEMS.

INSTALLATION: YUMA PROVING GROUND

YUMA, AZ

CDR. COL. H. B. LOVE JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	48.561	55.328
TOTAL PROCUREMENT	1.948	2.941
TOTAL OEM	0.501	0.427
TOTAL OTHER	8.944	6.849
TOTAL ANNUAL LAB	54.949	65.545
 TOTAL INHOUSE	 52.299	 65.545
TOTAL INHOUSE RDT&E	48.561	55.328
ANNUAL OPERATING COST	18.432	16.266

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	888	0	48	835
CIVILIAN	585	0	63	522
TOTAL	968	0	111	857

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
828063	0.832	114.288	1897.891	1518.011	65.809	90.977

...MISSION

PLAN, CONDUCT, SPT DT AIR DEL EQ, L-RNGE TUBE ARTY, ACFT WPNS SYS, MOB EQUIP. PLAN, CONDUCT, RPT DESERT TEST. PROVIDE TEST, EVAL ADVICE, GUIDANCE TO PROSPECTIVE FACILITY USERS. DEVELOP, MAINTAIN MASTER PLAN FOR INSTALLATION, FACILITIES, METHODOLOGY AND INSTRUMENTATION

...CURRENT IMPORTANT PROGRAMS

ADVANCED ATTACK HELICOPTER

XMT TANK

GLOBAL POSITIONING SYSTEM

HIGH ALTITUDE AIRDROP RESUPPLY SYSTEM

XM785 155-MM PROJECTILE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

INSTRUMENTED 60 KM ARTILLERY RANGE

VEHICLE TEST COURSES AND MOBILE DYNAMOMETERS

INSTRUMENTED 20X80 KM AIRCRAFT ARMAMENT RANGE

INSTRUMENTED AIR DELIVERY DROP ZONES

AIRSPACE WITH LASER, POSITION LOCATING SYSTEM, & CINETHEODOLITE TRACKING

STATIONARY, MOVING AND SIMULATED TARGETS ARRAY

INSTRUMENTED PROJECTILE IMPACT AREAS WITH AUTOMATED SCORING

PHYSICAL AND CHEMICAL TEST FACILITIES

ENVIRONMENTAL SIMULATION TEST FACILITIES

SCIENTIFIC COMPUTER CENTER WITH REAL-TIME TEST CONTROL AND DATA DISPLAY

VEHICLE, WEAPONS AND AIRCRAFT MAINTENANCE AND EVALUATION FACILITIES

INSTRUMENTATION CALIBRATION FACILITY

## INSTALLATION: AEROSPACE MEDICAL RESEARCH LABORATORY

PENSACOLA, FL.

C.O. CAPT. W. M. HOUK

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981		1982
	(ACTUAL)	(ACT + EST)	
TOTAL RDT&E	8.821	8.438	
TOTAL PROCUREMENT	0.000	0.000	
TOTAL O&M	0.282	0.000	
TOTAL OTHER	0.806	0.698	
TOTAL ANNUAL LAB	4.859	4.181	
 TOTAL INHOUSE	 8.928	 8.628	
TOTAL INHOUSE RDT&E	2.920	2.952	
ANNUAL OPERATING COST	0.990	1.184	

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL		NON- PROF
			PROF	NON- PROF	
MILITARY	42	8	27		15
CIVILIAN	58	10	25		33
TOTAL	100	18	52		48

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7	110.323	6.164	14.672	131.159	8.180	3.074

## ...MISSION

CONDUCT RESEARCH, DEVELOPMENT, TEST AND EVALUATION IN AVIATION MEDICINE AND ALLIED SCIENCES RELATED TO THE SAFETY AND PERFORMANCE OF NAVY AND MARINE CORPS PERSONNEL.

## ...CURRENT IMPORTANT PROGRAMS

AVIATION MEDICAL PERFORMANCE BASE STANDARDS.

PHYSIOLOGICAL AND BEHAVIORAL EFFECTS NONIONIZING RADIATION.

HUMAN FACTORS DESIGN CRITERIA DEVELOPMENT.

DEVELOPMENT IN PERFORMANCE ENHANCEMENT IN NAVAL MOTION ENVIRONMENTS.

AVIATION VISUAL PERFORMANCE REQUIREMENTS AND CAPABILITIES.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

MICROWAVE AND EXTREMELY LOW FREQUENCY NONIONIZING RADIATION FACILITY.  
 SLOW ROTATION ROOM. CORIOLIS ACCELERATION PLATFORM. HUMAN DISORIENTATION DEVICE. STILL-WERNER CHAIR. OFF VERTICAL ROTATING CHAIR. ANACHOIC AND REVERBERANT CHAMBERS. AUTOMATED PULMONARY FUNCTION. TREADMILL. VECTOR AND ECHOCARDIOGRAPH. THERMOGRAPHIC IMAGING SYSTEM. 30 BINOCULAR EYE-TRACKER AND VISUAL STIMULATOR ELECTRON MICROSCOPE. VIVARIUM WITH OPERATING SUITE. EQUIPPED FOR HUMAN AND ANIMAL EXPERIMENTS IN UNUSUAL FORCE ATMOSPHERIC ACOUSTICAL ELECTROMAGNETIC ENVIRONMENTS. COMPLEX TASKS HUMAN PERFORMANCE MEASUREMENT SYSTEMS.

INSTALLATION: AIR DEVELOPMENT CENTER

JOHNSVILLE, PA.

C.O. CAPT. J. B. ANDERSON

TECH. DIR. MR. R. S. BUFFUM

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	159.656	184.125
TOTAL PROCUREMENT	44.902	30.608
TOTAL O&M	29.841	30.994
TOTAL OTHER	29.526	24.265
TOTAL ANNUAL LAB	268.725	269.992
 TOTAL INHOUSE	 146.688	 159.978
TOTAL INHOUSE RDT&E	99.764	115.707
ANNUAL OPERATING COST	84.776	41.502

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	268	5	200	63
CIVILIAN	2047	83	1182	915
TOTAL	2310	88	1332	978

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
840	852.000	88.000	654.000	1589.000	87.600	71.200

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CENTER FOR NAVAL AIRCRAFT SYSTEMS  
LESS AIRCRAFT LAUNCHED WEAPON SYSTEMS

...CURRENT IMPORTANT PROGRAMS

CARRIER ANTI-SUBMARINE WARFARE MODULE  
S-3A, F-14, F-18, VP PROGRAM  
LIGHT AIRBORNE MULTI-PURPOSE SYSTEMS  
NAVSTAR GPS  
J-TIDS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AIRCRAFT SYSTEMS SIMULATION, AIRBORNE SEARCH & RESCUE, INERTIAL  
NAVIGATION TECHNOLOGY, AIR VEHICLE TECHNOLOGY STRUCTURES, MATERIALS,  
FLIGHT DYNAMICS, PERFORMANCE, FLIGHT CONTROL, AIRBORNE ASW SYSTEMS.  
DEVELOP & INTEGRATION OF AIRBORNE SYSTEMS INCLUDING ELECTRONIC  
SURVEILLANCE & COUNTERMEASURES, COMMUNICATIONS, NAVIGATION INFORMATION  
PROCESSING & DISPLAY, ENVIRONMENTAL SENSING, ELECTROMAGNETIC/MAGNETIC,  
ACOUSTIC, ELECTRO-OPTIC, & PHOTOGRAPHIC, A/C SUPPORT SYSTEMS, A/C COST  
METHODOLOGY AND LOGISTICS, AEROSPACE MEDICINE AND AVIATION PHYSIOLOGY  
AND SUPPORT TO OTHER ACTIVITIES AS DIRECTED.

INSTALLATION: AIR PROPULSION CENTER

TRENTON, N.J.

C.O. CAPT. E. J. STRUM

TECH. CONSULTANT MR. B. T. MCWILLIAMS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	32.615	48.894
TOTAL PROCUREMENT	0.296	1.543
TOTAL OEM	1.938	1.510
TOTAL OTHER	1.116	0.808
TOTAL ANNUAL LAB	85.965	52.755
 TOTAL INHOUSE	24.038	30.062
TOTAL INHOUSE RDT&E	22.445	27.869
ANNUAL OPERATING COST	8.595	8.904

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	8	1	8	0
CIVILIAN	588	0	158	430
TOTAL	596	1	166	430

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
68	492.618	14.706	128.710	636.034	50.966	10.737

...MISSION

PROVIDE NAVAIR & FLEET COMPLETE TECHNICAL & ENGINEERING SUPPORT FOR AIR-BREATHING PROPULSION SYSTEMS, ACCESSORIES, COMPONENTS AND FUELS & LUBES. MANAGE AND PERFORM APPLIED R&D ON NEW PROPULSION SYSTEMS; EVALUATE NEW SYSTEMS. BY T&E ASSURE MISSION ACCOMPLISHMENT AND SOLVE FLEET PROBLEMS.

...CURRENT IMPORTANT PROGRAMS

CRUISE MISSILE ENGINE (F107) QUALIFICATION OF ENGINE IMPROVEMENTS  
F404-GE-400 FULL AUTHORITY DIGITAL ELECTRONIC CONTROL EVALUATION  
F402-RR-402 AMBIENT TEMPERATURE EFFECTS ON ACCELERATION TIME  
PETROLEUM & SYNTHETIC AIRCRAFT ENGINE FUEL DEVELOPMENT, TEST & EVAL  
CORROSION-INHIBITED MIL-L-28699 LUBRICATING OIL PROGRAM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THREE LARGE ALTITUDE CELLS, TWO LARGE SEA LEVEL CELLS AND FOUR SMALL ALTITUDE CELLS PROVIDE ENVIRONMENTAL AND FLIGHT SIMULATION CAPABILITY OF SEA LEVEL TO 100000 FEET; MINUS 65 TO PLUS 650 DEGREES F; FLIGHT SPEEDS FROM ZERO TO MACH 8 TO TEST TURBOJET/FAN AND TURBOPROP/SHAFT ENGINES. FIVE TEST ROOMS TO TEST STARTERS, ACCESSORIES AND AUXILIARY POWER UNITS. TEN TEST ROOMS AND CHEMISTRY LAB USED FOR R&D ON FUELS, LUBES AND BEARINGS. SPECIAL TEST FACILITIES ARE ROTOR SPIN FACILITY, HELICOPTER TRANSMISSION TEST FACILITY, GYRO KIG AND ENGINE TURNTABLE. FACILITIES ARE USED FOR R&D ON ADVANCED FUELS AND LUBRICATING OILS, OIL-WETTED ENGINE COMPONENTS, AIR POLLUTION, LOW CYCLE FATIGUE, CONTAINMENT, NOISE AND I/R PROGRAMS. NAPC QUALS OILS, MANAGES NAVY EXPLORATORY AND ADV DEVEL PRGMS, PROVIDES ADMN & TECH DIR TO SELECTED NAVAIR CONTRACTS.

INSTALLATION: AIR TEST CENTER

PATUXENT RIVER, MD.

C.O. RADM J. G. WISSLER

TECH. DIR. MR. J. F. LYNCH

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	108.882	128.147
TOTAL PROCUREMENT	16.170	17.862
TOTAL O&M	24.679	26.705
TOTAL OTHER	40.883	39.763
TOTAL ANNUAL LAB	190.564	211.977
 TOTAL INHOUSE	 145.871	 149.993
TOTAL INHOUSE RDT&E	80.667	85.804
ANNUAL OPERATING COST	67.279	82.208

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		TOTAL		NON- PROF
		PHDS	PROF	PHDS	PROF	
MILITARY	1493	1	225	225	1268	
CIVILIAN	2004	5	416	416	1588	
TOTAL	3497	6	641	641	2856	

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
6898	962.545	858.167	8488.111	4808.823	142.667	55.690

...MISSION

PRINCIPAL SITE FOR FULL SCALE DEVELOPMENT TEST AND EVALUATION AND SERVICE SUITABILITY TRIALS OF ALL NAVY AND MARINE AIRCRAFT PLUS GROUND SUPPORT EQUIPMENT AND TRAINING SIMULATORS. TRAINING OF NAVY TEST PILOTS AND DEVELOPMENT OF AIRCRAFT TESTING TECHNOLOGY AND FACILITIES.

...CURRENT IMPORTANT PROGRAMS

F-18 AND LAMPS FULL SCALE DEVELOPMENT AND SERVICE SUITABILITY TESTING. CONDUCT OF TECHEVALS AND BIS TRIALS FOR UPDATE/IMPROVEMENTS FOR F-14, A-4, A-6, A-7, EA-6, AV-8P-3, S-8, E-2, EC-1SO, AH-1, UH-1, CH-53, SH-2 AND SH-3. CONDUCT OF T&E ON AUTOMATIC TEST EQUIPMENT, COMPUTERS AND SOFTWARE, HUMAN FACTORS, RELIABILITY AND MAINTAINABILITY, AND SIMULATORS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE LARGE, RESTRICTED, INSTRUMENTED AIRSPACE, REAL-TIME RANGE AND AIRCRAFT DATA PROCESSING; SIMULATION LABORATORIES FOR AIRBORNE WEAPONS SYSTEMS AND SOFTWARE; ENVIRONMENTAL SIMULATORS FOR UNDERWATER ACOUSTICS, ELECTRONIC WARFARE, AND ELECTROMAGNETIC VULNERABILITY TESTING AIRCRAFT GUN FIRING TUNNEL, AIRCRAFT ELECTRICAL SYSTEMS TEST FACILITY; CONTROLLED ENVIRONMENT AIRCRAFT ENGINE TEST FACILITY; AIRCRAFT CARRIER CATAPULT AND ARRESTMENT GEAR INSTALLATION; COMMUNICATIONS SYSTEMS TEST RANGE; REMOTE CONTROLLED SEABORNE AND AIRBORNE TARGETS; HUMAN FACTORS AND BIOMEDICAL LABORATORIES; ELECTROMAGNETIC SHIELDED HANGAR; PRECISION CONTROLLED ELECTR-OPTICAL TARGET AND TEST RANGE; EXTENSIVE AIRCRAFT AND GROUND BASED INSTRUMENTATION DEVELOPMENT LABORATORIES.

INSTALLATION: ARCTIC RESEARCH LABORATORY

BARROW, AK.

C.O. CDR. MARIA KAZANOWSKA

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	8.862	0.000
TOTAL PROCUREMENT	0.000	0.000
TOTAL OEM	0.106	0.000
TOTAL OTHER	2.475	0.000
TOTAL ANNUAL LAB	6.448	0.000
TOTAL INHOUSE	0.000	0.000
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	8.862	0.000

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	0	0	2	2
CIVILIAN	0	0	0	0
TOTAL	0	0	2	2

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
300	47.810	15.987	363.049	481.846	18.158	0.880

...MISSION

PROVIDE OPERATIONS AND MAINTENANCE SERVICES TO ACCOMPLISH TRANSITION OF FACILITY OPERATIONAL STATUS TO CARETAKER LEVEL IN PREPARATION FOR CLOSURE.

...CURRENT IMPORTANT PROGRAMS

PROVIDE OPERATIONS AND MAINTENANCE SERVICES TO OPERATE THE FACILITY AND REDUCE OPERATING LEVEL.  
NO RESEARCH PROGRAMS CONDUCTED.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE FACILITY CONSISTS OF 110 SEMI-PERMANENT BUILDINGS (APPROX 50 BLDGS TO BE USED IN FY 82) INCLUDING A LABORATORY-ADMINISTRATION-BILLETING BLDG WHICH HAS 48 LABORATORY SPACES, SLEEPING QUARTERS FOR 100 PEOPLE, ADMIN OFFICES, AND GAME ROOM. THE LAB PROVIDES FACILITIES MAINTENANCE, UTILITY GENERATION AND DISTRIBUTION, MOTOR VEHICLE OPERATION AND MAINTENANCE, JANITORIAL SERVICE, COMMUNICATIONS, FOOD SERVICES, AND PROVISION OF SPECIAL SERVICES, INCLUDING RECREATION AND RESALE ACTIVITIES. THE LAB CAPABILITY INCLUDES LIMITED SUPPORT OF MILITARY OPERATIONS IN THE ARCTIC INCLUDING SEARCH AND RESCUE. THIS FACILITY WAS DISCONTINUED IN FY 1981.

## INSTALLATION: ATLANTIC FLEET WEAPONS TRAINING FACILITY ROOSEVELTROADS, P.R.

C.O. CAPT. L. J. DRUDE

TECH. DIR. MR. TOMAS RAMIREZ

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	0.094	0.095
TOTAL PROCUREMENT	8.665	10.268
TOTAL O&M	15.672	16.821
TOTAL OTHER	4.172	2.974
TOTAL ANNUAL LAB	28.608	29.653
 TOTAL INHOUSE	 4.820	 5.072
TOTAL INHOUSE RDT&E	0.008	0.008
ANNUAL OPERATING COST	1.169	1.049

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	100	0	82	68
CIVILIAN	84	0	24	10
TOTAL	184	0	56	78

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP
3696	0.000	14.957	182.152	197.109	12.600 109.000

## ...MISSION

TO OPERATE, MAINTAIN AND DEVELOP WEAPONS TRAINING FACILITIES AND SERVICES  
IN DIRECT SUPPORT OF THE TRAINING OF FLEET FORCES AND OTHER ACTIVITIES  
AND FOR THE DEVELOPMENT, TEST AND EVALUATION OF WEAPONS SYSTEMS

## ...CURRENT IMPORTANT PROGRAMS

CNO PROJECT 189-OT-IIB LAMPS MK-3 OPEVAL  
CNO PROJECT 679 UHF SATCOM BUOY TEST  
CNO PROJECT 186 MK-86 FCS GP  
HMS BOARDSWORD G.W.S.-25-SEA WOLF-OT  
AN/ALQ-78 ESM SYSTEM TESTING

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

NAVY'S LARGEST TRAINING FAC FOR ATLANTIC FORCES WITH 202,000 SQ.MI. COMBINED SEA AREA FOR AIR, SURFACE AND SUBSURFACE WARFARE OPERATIONS. CENTRAL COMMAND AND CONTROL SYSTEM WITH NTDS LINKING, REALISTIC EW ENVIRONMENT, SURVEILLANCE/TRACK RADARS, AIR/SURFACE TARGETS PRESENTATION, LARGE SCREEN DISPLAY SYSTEM FOR OPS MONITOR/CONTROL, EVENT RECONSTRUCTION, AND VARIOUS OTHER INSTRUMENTATION SYS. FLTAC FIELD STATION FOR MISSILE ANALYSIS AND EVALUATION. AIR TO GRND AND SURFACE TO SURFACE WEAPONS TARGET FACILITIES FOR CONVENTIONAL AIRCRAFT ORDNANCE DELIVERY, STRAFING AND NAVAL GUNFIRE WITH RADAR, TV BOMB SCORING SYSTEM AND OTHER SCORING/SPOTTING SYSTEMS. UNDERWATER RANGE FOR PRECISION SURFACE AND SUBSURFACE TRACKING, WSATS AND FORACS. NAVSTA PROVIDES FOR AIRCRAFT/SHIPS LOGISTICS SUPPORT, BOQ AND BEQ.

INSTALLATION: BIODYNAMICS LABORATORY

NEW ORLEANS LA

C.O. CAPT. J. E. WENGER      SCI. DIR. DR. C. L. EWING

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	3.052	4.021
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.005	0.000
TOTAL OTHER	0.596	0.672
TOTAL ANNUAL LAB	3.658	4.693
 TOTAL INHOUSE	 8.265	 4.208
TOTAL INHOUSE RDT&E	2.714	8.555
ANNUAL OPERATING COST	0.400	0.578

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	86	8	11	25
CIVILIAN	50	7	25	25
TOTAL	86	15	86	50

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	82.014	21.578	0.000	58.592	0.400	25.000

## ...MISSION

TO CONDUCT BIOMEDICAL RESEARCH ON THE EFFECTS OF MECHANICAL FORCES ENCOUNTERED IN SHIPS & AIRCRAFT ON NAVAL PERSONNEL; TO ESTABLISH HUMAN TOLERANCE LIMITS FOR THESE FORCES; & TO DEVELOP PREVENTIVE & THERAPEUTIC METHODS TO PROTECT PERSONNEL FROM SUCH FORCES.

## ...CURRENT IMPORTANT PROGRAMS

LONG-TERM EFFECTS OF BIODYNAMIC STRESS EXPERIMENTS.  
 PHYSIOLOGICAL AND PERFORMANCE EFFECTS OF SHIP MOTION ON CREW MEMBERS.  
 DETERMINATION OF HUMAN DYNAMIC RESPONSE TO IMPACT ACCELERATION.  
 EFFECTS OF IMPACT ACCELERATION ON HUMAN NEUROPHYSIOLOGY.  
 DEVELOPMENT OF AND VALIDATION OF HUMAN ANTHROPOMORPHIC MANIKINS.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

IMPACT FACILITY 1 MEGA N THRUST ACCELERATOR. 218 M ENVIRONMENTALLY  
 ENCLOSED TRACK. 17.8 K N THRUST VERTICAL ACCELERATOR. X-RAY  
 CINEMATOGRAPHY ELECTRODYNAMIC MOTION EXCITORS. C210 SHAKER. SHIP MOTION  
 GENERATOR. 22 CHANNEL INERTIA DATA ACQUISITION SYSTEM AND HIGH SPEED  
 CAMERAS EQUIPPED FOR HUMAN AND ANIMAL EXPERIMENTS IN UNUSUAL FORCE  
 ATMOSPHERIC ACOUSTICAL ELECTROMAGNETIC ENVIRONMENTS.

## INSTALLATION: BIOSCIENCES LABORATORY

OAKLAND, CA.

C.O. CDR. J. E. SIPPET

SCI. DIR. DR. D. KINGSBURY

## PROGRAM DATA BY FISCAL YEAR ('MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	8.689	2.866
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.246	0.220
TOTAL ANNUAL LAB	8.885	3.086
 TOTAL INHOUSE	8.885	3.086
TOTAL INHOUSE RDT&E	8.689	2.866
ANNUAL OPERATING COST	0.670	0.783

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON-
				PROF
MILITARY	9	8	4	5
CIVILIAN	6	0	0	6
TOTAL	15	8	4	11

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	COST (MILLION \$)	
	LAB	ADMIN	OTHER		REAL PROP	EQUIP
5	77.625	8.731	84.646	121.002	1.000	3.409

## ...MISSION

THE MISSION OF THE BIOSCIENCES LABORATORY IS TO CONDUCT RESEARCH AND DEVELOPMENT IN THE BIOSCIENCES RELATED TO THE NEEDS OF THE NAVAL ESTABLISHMENT

## ...CURRENT IMPORTANT PROGRAMS

IMMUNE MECHANISMS OF INFECTIOUS DISEASES

BLOOD GROUP DEGRADING ENZYMES

RECOMBINANT DNA TECHNOLOGY

TOXIC EFFECTS OF ORGANOMETAL COMPOUNDS IN THE MARINE ENVIRONMENT

TOXIC PROPERTIES ON NAVY RELEVANT CHEMICALS AND WASTES

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

EQUIPMENT INCLUDES CLASS III CONTAINMENT FACILITIES FOR HANDLING PATHOGENIC VIRUS AND BACTERIA, CONTINUOUS FLOW LIQUID WASTE DECONTAMINATION UNIT, PROCESS AIR DECONTAMINATION SYSTEM, ELECTRON SPIN RESONANCE AND NUCLEAR MAGNETIC RESONANCE SPECTROMETERS, SPECTROPHOTOMETER, SPECTROFLUOROMETER AND BOTH SCANNING AND TRANSMISSION ELECTRON MICROSCOPES. THE EQUIPMENT IS CONTINUOUSLY BEING MODIFIED AND EXPANDED ACCORDING TO CURRENT PROJECTS. NBL IS A CONTRACT BASIC RESEARCH LAB WITH THE UCB & MOST SCIENTIFIC & TEC PERSONNEL. UCB EMPLOYEES.

## INSTALLATION: CIVIL ENGINEERING LABORATORY

PORT HUENEME, CA.

C.O. CAPT. JAMES. H. OSBORN

TECH. DIR. DR. DONALD BIRKIMER

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	24.988	81.650
TOTAL PROCUREMENT	0.818	0.800
TOTAL O&M	2.752	8.020
TOTAL OTHER	1.290	3.840
TOTAL ANNUAL LAB	29.848	88.810
 TOTAL INHOUSE	 17.122	 15.560
TOTAL INHOUSE RDT&E	18.979	12.040
ANNUAL OPERATING COST	4.421	8.720

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	16	0	8	8
CIVILIAN	820	29	182	188
TOTAL	386	29	190	146

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
80	81.840	71.748	44.158	197.746	7.598	3.429	

## ...MISSION

MISSION OF LABORATORY IS TO BE THE PRINCIPAL RDT AND E CENTER FOR NAVY SHORE FACILITIES, FIXED SURFACE AND SUBSURFACE OCEAN FACILITIES AND FOR THE NAVY AND MARINE CORPS CONSTRUCTION FORCES.

## ...CURRENT IMPORTANT PROGRAMS

NAVY SHORE FACILITIES SUPPORT. NAVY SEAFLOOR INSTALLATIONS, AMPHIBIOUS AND ADVANCED BASE TECHNOLOGY. ENVIRONMENTAL PROTECTION. ORGANIC MATERIALS. ENERGY TECHNOLOGY. DEEP OCEAN TECHNOLOGY. OFFSHORE BULK FUEL TRANSFER. INDEPENDENT EXPLORATORY DEVELOPMENT. INDEPENDENT RESEARCH. CONTAINER OFF-LOADING TRANSFER SYSTEM (COTS). MARINE CORPS. ARMY.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

PRESSURE VESSEL FACILITY WITH 9, 18, 34, 72, INCH VESSELS SIMULATION PRESSURES TO OCEAN DEPTHS OF 20,000 FEET. DIVING LOCKER AND EQUIPMENT FOR 10 DIVERS. SEA FLOOR SOILS LAB. ENERGY TEST BED. CLASS G PHOTO LAB. PHYSICAL SECURITY LABS. CHEMISTRY LAB. INSTRUMENTATION LAB. WARPING TUG ELECTROMAGNETIC FACILITY. CORROSION AND METALLURGICAL LABS. ENVIRONMENTAL RESEARCH LAB. CDC 8090 TERMINAL WITH HIGH SPEED READER AND LINE PRINTER. DIGITAL MAG TAPE. PEN PLOTTER. CURRENT SENSORS LAB. ENERGY MONITORING CAPABILITY. PROTOTYPE MACHINE, WELDING, CARPENTER, AND RIGGING SHOPS. SHALLOW OCEAN SIMULATION FACILITY. MATERIAL TESTING LAB. SYSTEMS LAB. CONCRETE MIXING LAB.

## INSTALLATION: CLOTHING &amp; TEXTILE RESEARCH FACILITY

NATICK, MA.

C.O. CDR. JOHN B. SEWELL

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	1.782	1.890
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.986	1.814
TOTAL OTHER	0.222	0.169
TOTAL ANNUAL LAB	2.990	8.878
 TOTAL INHOUSE	 2.990	 8.226
TOTAL INHOUSE RDT&E	1.782	1.743
ANNUAL OPERATING COST	0.077	0.065

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON- PROF
		PHDS	TOTAL PROF	
MILITARY	1	0	1	0
CIVILIAN	56	1	84	21
TOTAL	56	1	85	21

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	10.000	9.000	8.000	22.000	0.460	0.497

## ...MISSION

CONDUCT RESEARCH DEVELOPMENT TEST & EVALUATION & PROVIDE ENGINEERING SUPPORT IN CLOTHING TEXTILES & RELATED FIELDS ASSOCIATED WITH SERVICE CLOTHING & ENVIRONMENTAL PROTECTIVE CLOTHING

## ...CURRENT IMPORTANT PROGRAMS

BATTLE DRESS CLOTHING

WOMEN'S SEA ENVIRONMENTAL PROTECTIVE CLOTHING

MATERIALS FOR FUTURE SPECIAL PROTECTIVE CLOTHING

IMPROVED FIREFIGHTERS' CLOTHING

OCCUPATIONAL &amp; SAFETY FOOTWEAR

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

HYDRO-ENVIRONMENT TEMPERATURE LAB, AIR CHAMBER-MARINE TANK REPRODUCES AIR-SEA TEMP CONDITIONS FOR WATER IMMERSION PHYSIOLOGY & BUOYANCY TESTS. ENVIRONMENTAL TEST CHAMBER FOR EVALUATING PROTECTIVE CLOTHING UNDER WORK STRESS & EXTREME TEMPERATURES.

INSTRUMENTED THERMAL MANIKIN FOR DETERMINING THERMAL INSULATION OF CLOTHING IN WET & DRY ENVIRONMENTS.

THERMAL FLAMMABILITY APPARATUS FOR CONDUCTING FLAME RETARDANCY.

FLAMMABILITY &amp; HEAT RESISTANCE MATERIAL TESTING.

CHEMICAL & PHYSICAL TESTING EQUIPMENT FOR CONDUCTING RDT&E ON FABRICS, YARNS, FIBERS, LEATHER, PLASTICS, RUBBER, DYES, & FINISHES.

SEWING MACHINES &amp; PATTERN DRAFTING FOR DEVELOPING GARMENTS.

INSTALLATION: COASTAL SYSTEMS CENTER

PANAMA CITY, FL.

C.O. CAPT. R. D. BENNETT

TECH. DIR. MR. G. C. DILWORTH JR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	86.114	41.148
TOTAL PROCUREMENT	4.361	5.925
TOTAL O&M	14.089	10.821
TOTAL OTHER	8.093	8.869
TOTAL ANNUAL LAB	57.607	61.768
 TOTAL INHOUSE	 82.285	 85.982
TOTAL INHOUSE RDT&E	20.028	28.855
ANNUAL OPERATING COST	18.653	18.579

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	105	0	18	92
CIVILIAN	618	25	287	881
TOTAL	723	25	300	428

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
685	842.248	44.891	864.688	751.827	48.905	20.458	

...MISSION

TO BE THE PRINCIPAL NAVY ACTIVITY FOR CONDUCTING RDT&E IN SUPPORT OF NAVAL MISSIONS AND OPERATIONS THAT TAKE PLACE PRIMARILY IN THE COASTAL REGIONS.

...CURRENT IMPORTANT PROGRAMS

MINE COUNTERMEASURES

TORPEDO AND SONAR COUNTERMEASURES

DIVING, SALVAGE, AND SPECIAL WARFARE

COASTAL WARFARE

COASTAL TECHNOLOGY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE- OCEAN SIMULATION FAC TO 2250' DEPTH. HYDROSPACE LAB. SWIMMER/DIVER R&D FAC. GAS ANALYSIS LAB. SONAR TEST BED. MAGNETIC TARGET DETECTION & CLASSIFICATION RANGE. MAGNETIC LAB. OPTICAL POSITIONING SYS. TWO UNMANNED OFFSHORE SENSOR/INSTRUMENTATION PLATFORMS. CALIBRATION AND STANDARDS FAC. MECHANICAL CALIBRATION LAB. CABLE TEST FAC. ACOUSTIC TEST FAC. TRANSDUCER LAB. PRECISION ACOUSTIC TANK. ACOUSTIC ANAL FAC. SYSTEMS DEVELOPMENT AND TEST FAC. ELECTRONIC TRACKING RANGE, PORTABLE TRACKING & POST RUN ANALYSIS SYS. COUNTERMEASURES EVALUATOR IN REAL-TIME SIMULATION BURROUGHS 6810 DIGITAL COMPUTER AND ASSOCIATED DATA COMMUNICATIONS SYS. ENVIRONMENTAL MONITORING FAC. SONAR PROCESSING FAC WITH DATA COLLECTION SYS. PIER SPACE & BOATS TO INCLUDE RESEARCH VESSELS ATHENA I&II, MSO-448 USS FIDELITY. INDUSTRIAL SHOPS. HELIPORT COMPLEX WITH 2 RH53D & 1 UHIE.

INSTALLATION: DAVID W. TAYLOR SHIP R&D CENTER

BETHESDA, MD.

C.O. CAPT. B. F. TIBBITS

TECH. DIR. DR. A. POWELL

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	157.509	168.882
TOTAL PROCUREMENT	18.819	5.952
TOTAL O&M	21.401	21.182
TOTAL OTHER	6.245	2.079
TOTAL ANNUAL LAB	198.474	198.095
 TOTAL INHOUSE	 185.788	 181.672
TOTAL INHOUSE RDT&E	112.687	109.401
ANNUAL OPERATING COST	32.905	41.685

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	75	1	52	23
CIVILIAN	2408	118	1188	1275
TOTAL	2483	119	1185	1298

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
825	1711.149	111.178	268.041	2090.868	78.472	78.089

...MISSION

TO BE THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION (RDT&E) CENTER FOR NAVAL VEHICLES AND LOGISTICS AND TO PROVIDE RDT&E SUPPORT TO THE U.S. MARITIME ADMINISTRATION AND THE MARITIME INDUSTRY.

...CURRENT IMPORTANT PROGRAMS

SURFACE/SUBSURFACE SHIP SILENCING (ACOUSTIC/NON-ACOUSTIC/MACHINERY), AERODYNAMICS (CIRCULATION CONTROL ROTORS AND WINGS), SHIP STRUCTURES, MATERIALS, SURVIVABILITY (HIGH-STRENGTH ALLOYS/STEELS, DESIGN/INTEGRITY) PROPULSION/AUXILIARY MACHINERY (SUPERCONDUCTING ELECTRIC PROPULSION, POWER/PIPING/MACHINERY SYSTEMS), HYDRODYNAMICS (MANEUVERING/SEAKEEPING).

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT/FACILITY CAPABILITIES: SHALLOW AND DEEP WATER TOWING BASINS, MANEUVERING AND SEAKEEPING BASIN, WIND TUNNELS, ANECHOIC FLOW FACILITY, WATER TUNNELS, STRUCTURAL EVALUATION FACILITY, UNDERWATER EXPLOSIONS LABORATORY BARGE, PRESSURE TANKS, SUBMARINE INTERNAL FLUID DYNAMICS FACILITY, METALLURGICAL CHARACTERIZATION AND EVALUATION FACILITY, WELDING DEVELOPMENT LABORATORY, ENVIRONMENTAL PROTECTION LABORATORY, PAINT DEVELOPMENT LABORATORY, MACHINERY DEVELOPMENT LABORATORY, FUELS LABORATORY, FABRICATION TECHNOLOGY LABORATORY, SHOCK AND VIBRATION FACILITY, ELECTRIC PROPULSION TEST CRAFT, DEEP OCEAN TECHNOLOGY HIGH-PRESSURE TEST FACILITY, TURBO-ELECTRIC PROPULSION LABORATORY, NOISE MEASUREMENT FACILITY

INSTALLATION: DENTAL RESEARCH INSTITUTE.

GREAT LAKES, IL.

C.O. CAPT. D. W. TURNER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	1.188	0.872
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.681	0.740
TOTAL ANNUAL LAB	1.764	1.612
TOTAL INHOUSE	1.624	1.612
TOTAL INHOUSE RDT&E	0.998	0.872
ANNUAL OPERATING COST	0.845	0.895

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	11	16	18
CIVILIAN	15	4	6	9
TOTAL	44	15	22	22

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	80.650	4.815	8.090	43.555	0.000	0.849

...MISSION

TO CONDUCT RESEARCH DEVELOPMENT TEST AND EVALUATION IN DENTAL AND ALLIED SCIENCES WITH PARTICULAR EMPHASIS ON PROBLEMS OF DENTAL AND ORAL HEALTH IN NAVY AND MARINE CORPS POPULATIONS AND ON PROBLEMS OF FLEET AND FIELD DENTISTRY.

...CURRENT IMPORTANT PROGRAMS

PROCEDURES FOR TREATMENT OF DENTAL PULP DISEASE

WOUND HEALING OF SUPPORTING TISSUES

DENTAL EQUIPMENT. DEVELOPMENT AND EVALUATION OF FLEET HEALTH CARE

MONITORING ORAL HEALTH OF NAVAL PERSONNEL

EFFECT OF FLUORIDE RINSE ON DENTAL PLAQUE FLUORIDE LEVELS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AMINO ACID ANALYZER/ATOMIC ABSORPTION UNIT/FLUORIDE ELECTRODES/ LIQUID SCINTILATION COUNTER/mini COMPUTER/GAS CHROMATOGRAPH UNIT/ FOUR DENTAL UNITS/FIVE DENTAL CHAIRS/TRANSMISSION ELECTRON MICROSCOPE/CRYO MICROTOME DIAZO PROCESSOR/SPECTROPHOTOMETERS/ORAL SURGERY CHAIR/ THERMAL BALANCE/VIVARIUM/ANIMAL SURGERY ROOM/XRAY EQUIPMENT/RPM INSTRUMENTS/ SOUND METERS/SHAKERS/INCUBATORS/CENTRIFUGES/BALANCES/FRACTIONATORS/ RECORDERS/FIELD DENTAL TREATMENT EQUIPMENT/PROTOTYPE SHOP/MARINE CORPS PROTOTYPE EXPEDITIONARY DENTAL TREATMENT SHELTER/ PHOTO LAB/ DENTAL EQUIPMENT REPAIR SHOP/

## INSTALLATION: ENVIRONMENTAL PREDICTION RESEARCH FACILITY MONTEREY, CA.

C.O. CAPT. W. G. SCHRAMM

DIR. OF RSCH. DR. A. WEINSTEIN

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	4.584	4.798
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.840	0.402
TOTAL ANNUAL LAB	4.924	5.200
 TOTAL INHOUSE	2.015	2.500
TOTAL INHOUSE RDT&E	1.675	2.098
ANNUAL OPERATING COST	0.718	0.750

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	14	1	5	9
CIVILIAN	30	7	30	0
TOTAL	44	8	35	9

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	
0	1.862	4.858	10.594	16.814	0.000	0.000

## ...MISSION

CONDUCT RESEARCH AND DEVELOPMENT DIRECTED TOWARD PROVIDING OBJECTIVE LOCAL, REGIONAL AND GLOBAL ENVIRONMENTAL ANALYSIS AND PREDICTION TECHNIQUES. PROVIDE PLANNING MODELING AND EVALUATION SERVICES TO DETERMINE THE EFFECT OF ENVIRONMENTAL ELEMENTS ON NAVAL WEAPON SYSTEMS

## ...CURRENT IMPORTANT PROGRAMS

DEVELOP TECHNIQUES FOR PROCESS/DISPLAY OF ENVIRONMENTAL SATELLITE DATA  
 DEVELOP COMPUTER MODELS TO ANALYZE/ASSIMILATE ATMOSPHERIC DATA  
 DEVELOP TECHNIQUES TO PREDICT/DIAGNOSE ATMOS AFFECTS ON WEAPON SYSTEMS  
 DEVELOP OBJECTIVE LOCAL/REGIONAL ATMOS ANALYSIS/PREDICTION TECHNIQUES  
 DEVELOP SYNOPTIC, SUBSYNOPTIC AND MESOSCALE ATMOS PREDICTION MODELS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

## DATACRAFT/5 COMPUTER

THREE NOVA 2 1 ECLIPSE 5/250, 1 HP9845A COMPUTER

ACCESS TO CDC CYBER 175 AND CYBER 208 COMPUTERS

ACCESS TO 8 CDC 6500 COMPUTERS

CAPABILITY OF BUILDING, ANAL ZING AND MODIFYING GLOBAL, REGIONAL AND LOCAL WEATHER MODELS

CAPABILITY OF RECEIVING ENHANCING AND ANALYZING REMOTELY SENSED ATMOS DATA

## INSTALLATION: EXPLOSIVE ORDNANCE DISPOSAL FACILITY

INDIAN HEAD, MD.

C.O. CAPT. R. M. DUNBAR

TECH. DIR. MR. L. A. DICKISON

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	7.457	6.455
TOTAL PROCUREMENT	1.864	2.424
TOTAL OSM	1.689	1.048
TOTAL OTHER	1.287	1.450
TOTAL ANNUAL LAB	12.247	11.872
 TOTAL INHOUSE	 8.794	 6.418
TOTAL INHOUSTR RDT&E	4.618	4.170
ANNUAL OPERATING COST	8.965	4.147

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	50	0	11	89
CIVILIAN	167	2	44	128
TOTAL	217	2	55	162

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1170	68.885	20.706	28.082	112.128	4.871	8.990

## ...MISSION

CONDUCT RESEARCH DEVELOPMENT, TEST AND EVALUATION CONCERNING BOTH THE DISPOSAL AND RENDER-SAFE PROCEDURES FOR CONVENTIONAL AND SPECIAL WEAPONS, GUIDED MISSILES, UNDERWATER WEAPONS, EXPLOSIVES, BIO AND CHEM. MUNITIONS, BOTH U.S. AND FOREIGN, PLUS THE REQUIRED TOOLS AND EQUIPMENT.

## ...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF RENDER SAFE AND DISPOSAL TOOLS FOR CONVENTIONAL MUNITIONS  
 DEVELOPMENT OF RENDER SAFE AND DISPOSAL PROCEDURES  
 IMPROVISED NUCLEAR DEVICE COUNTERMEASURES  
 TERRORIST DEVICE COUNTERMEASURES  
 EXPLOSIVE RANGE CLEARANCE TECHNIQUES

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

DEVELOP EXPLOSIVE ORDNANCE DISPOSAL -EOD- PROCEDURE, PREPARE AND PUBLISH EOD PUBLICATIONS FOR JOINT-SERVICE USE, CONDUCT EXP. AND ADV. DEVELOPMENT LEADING TO SPECIALIZED TOOLS AND EQUIP. NEEDED TO LOCATE, IDENTIFY, RECOVER, RENDER-SAFE AND DISPOSE OF ALL TYPES OF EXPLOSIVE ORDNANCE.  
 PREPARE AND MAINTAIN DOCUMENTATION FOR EOD TOOLS AND EQUIP. CONDUCT FIRST ARTICLE INSPECTION ON EOD TOOLS BEING PROCURED FOR ALL SERVICES.  
 CONDUCT IN-SEARCH ENGINEERING FUNCTIONS FOR EOD AND SWIMMER WEAPONS SYSTEM TOOLS. CONDUCT INITIAL EVALUATION OF FOREIGN EXPLOSIVE ORDNANCE.  
 MAINTAIN STOCK AND ISSUE EOD PUBLICATIONS FOR JOINT-SERVICE USE.  
 CAPABILITY OF TESTING EOD TOOLS TO DEPTH OF 400 FT IN A DIVING CHAMBER  
 CAPABILITY OF ANALYZING HIGH SPEED EVENTS WITH FLASH XRAYS AND PHOTOS

INSTALLATION: HEALTH RESEARCH CENTER

SAN DIEGO, CA.

C.O. CAPT. JESSE E. LANG

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	2.568	2.668
TOTAL PROCUREMENT	0.000	0.000
TOTAL OEM	0.000	0.000
TOTAL OTHER	0.591	0.686
TOTAL ANNUAL LAB	8.159	8.854
TOTAL INHOUSE	8.159	8.854
TOTAL INHOUSE RDT&E	2.568	2.668
ANNUAL OPERATING COST	0.845	0.870

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	81	5	15	16
CIVILIAN	62	10	28	36
TOTAL	98	15	41	52

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
1	19.052	7.159	0.000	28.211	0.147	0.765	

...MISSION

CONDUCT RSCH AND DEVELOPMENT ON MEDICAL AND PSYCHOLOGICAL ASPECTS OF HEALTH AND PERFORMING OF NAVAL SERVICE PERSONNEL AND TO PERFORM SUCH OTHER FUNCTIONS OR TASKS AS MAY BE DIRECTED BY CHIEF BUMED

...CURRENT IMPORTANT PROGRAMS

EFFECTS OF BENZODIAPINES ON SLEEP EEG AND PERFORMANCE  
DEVELOP INFORMATION SYSTEMS FOR MONITORING OCCUPATIONAL HEALTH & SAFETY  
EARLY DETECTION OF ENTERIC BACTERIAL INFECTIONS  
EVALUATION OF HEALTH RISKS FOR NAVY OCCUPATIONS  
PHYSICAL FITNESS/RQMTS & PERFORMANCE DURING SUSTAINED OPERATIONS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ELECTROENCEPH MONITORING OF SLEEP PATTERNS  
CARDIOVASCULAR STRESS TESTING LAB  
MUSCLE STRENGTH TESTING LAB  
CARDIOIMMUNO - ASSAY CAPABILITY  
SERUM AUTO-ANALYSIS  
MICROBIOLOGY DIAGNOSTIC KITS  
COMPUTER STORAGE-TOTAL USN/USMC HEALTH DATA  
COMPLETE HEALTH DATA FOR ENLISTED WOMEN  
BLOOD GAS MONITORING DURING AWAKE/ASLEEP

INSTALLATION: MEDICAL RESEARCH INSTITUTE

BETHESDA MARYLAND

C.O. CAPT. J. VOROSMARTI

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	14.081	12.042
TOTAL PROCUREMENT	0.000	0.000
TOTAL OEM	0.041	0.019
TOTAL OTHER	5.004	5.186
TOTAL ANNUAL LAB	19.126	17.197
TOTAL INHOUSE	17.112	16.782
TOTAL INHOUSE RDT&E	12.266	11.867
ANNUAL OPERATING COST	5.880	6.906

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	251	47	59	192
CIVILIAN	189	85	68	121
TOTAL	440	82	127	313

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
4	164.297	10.545	44.508	219.350	6.179	11.649

...MISSION

CONDUCT BASIC & APPLIED RESEARCH &  
DEVELOPMENT CONCERNED WITH THE HEALTH  
SAFETY & EFFICIENCY OF NAVY  
PERSONNEL

...CURRENT IMPORTANT PROGRAMS

TISSUE TYPING ORGAN TRANSPLANTS & IMMUNOSUPPRESSION IN RESTORATIVE SURG  
BASIC & APPLIED MICROBIOLOGY & VACCINE DEV TO CONTROL MALARIA & SCHISTO  
BASIC MECHANISM OF BACTERIAL & TRAUMATIC SHOCK HEAT STRESS & TOXIC MAT  
PSYCHOLOGICAL AND PHYSIOLOGICAL EFFECTS OF HYPERBARIC ENVIRONMENT  
TREATMENT OF ORAL DISEASE & TRAUMA ACCELERATION OF WOUND REPAIR

...FUNCTIONS/EQUIPMENT/CAPABILITIES

HYPBARIC RESEARCH FACILITY WITH MAN-RATED HYPERBARIC CHAMBERS  
HUMAN PHYSIOLOGICAL & HEAT STRESS EQUIPMENT & FACILITIES  
HUMAN TISSUE PRESERVATION & STORAGE EQUIPMENT & FACILITIES  
BIOHAZARDOUS MATERIALS HANDLING LAB EQUIPMENT & FACILITIES  
TOXICOLOGY EVALUATION EQUIP & FACILITIES INCLUDE HYPERBARIC CHAMBERS  
TRANSMISSION & SCANNING ELECTRON MICROSCOPES FLUORESCENT ANTIBODY CELL  
SORTER & COMPUTER  
EXPERIMENTAL ANIMAL FACILITIES ANIMAL HOUSE & OPERATING ROOMS  
LAB EQUIPMENT & FACILITIES FOR BASIC & APPLIED BIOCHEMICAL  
MICROBIOLOGICAL & PSYCHOLOGICAL STUDIES

INSTALLATION: MEDICAL RESEARCH UNIT NO.2

MANILA, PHILIPPINES

C.O. CAPT. W. H. SCHROEDER

SCI DIR. DR. J. H. CROSS

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	1.168	1.472
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.865	0.885
TOTAL ANNUAL LAB	1.531	1.857
 TOTAL INHOUSE	 1.531	 1.857
TOTAL INHOUSE RDT&E	1.168	1.472
ANNUAL OPERATING COST	0.891	0.564

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	82	7	11	21
CIVILIAN	53	4	25	88
TOTAL	90	11	86	54

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	9.500	6.500	0.000	16.000	0.000	0.538

...MISSION

TO CONDUCT RESEARCH AND DEVELOPMENT ON INFECTIONS DISEASES OF MILITARY IMPORTANCE THAT ARE ENDEMIC OR EPIDEMIC IN THE ASSIGNED GEOGRAPHIC AREAS TO PERFORM SUCH OTHER FUNCTIONS OR TASKS AS MAY BE DIRECTED BY CHIEF BUREAU OF MEDICINE AND SURGERY.

...CURRENT IMPORTANT PROGRAMS

CONDUCTS RESEARCH ON TROPICAL COMMUNICABLE DISEASES TO INCLUDE MALARIA, AMEBIASIS, PARASITIC DISEASES, ARTHROPOD VECTOR DISEASES AND DIARRHEA. EMPHASIS IS ON DIAGNOSIS, PREVENTION, AND TREATMENT OF TROPICAL INFECTIOUS DISEASES AND THEIR GEOGRAPHIC EPIDEMIOLOGY.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AUTOCLAVES; LAMINAR FLOW BIOLOGICAL SAFETY CABINETS; AIR AND CO<sub>2</sub> INCUBATORS; FLUORESCENT AND COMPOUND MICROSCOPES; DISSECTING MICROSCOPES; ZEUSS PHOTOMICROSCOPE; SUPERSPEED- AND ULTRACENTRIFUGES; LIQUID SCINTILLATION COUNTER; COULTER COUNTER; ULTRAFLOW TEMPERATURE FREEZERS; SPECTROPHOTOMETERS; FRACTION COLLECTORS; ELISA READER; IBM 1180 COMPUTER; INSECTORIUM; ANIMAL PRODUCTION FACILITIES; CELL CULTURE FACILITIES; FACILITIES IN INDONESIA INCLUDE 10000 SQUARE FEET FOR ALL SPACES.

## INSTALLATION: MEDICAL RESEARCH UNIT NO.8

CAIRO, EGYPT

C.O. CAPT. R. H. WATTEN

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	1.965	1.851
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.836	0.866
TOTAL ANNUAL LAB	2.791	2.717
 TOTAL INHOUSE	 2.791	 2.717
TOTAL INHOUSE RDT&E	1.965	1.851
ANNUAL OPERATING COST	0.860	0.880

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	84	9	18	21
CIVILIAN	202	10	82	170
TOTAL	286	19	45	191

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
5	41.068	8.962	55.850	105.880	1.443	0.800	

## ...MISSION

TO CONDUCT RESEARCH AND DEVELOPMENT OF INFECTIONS DISEASES OF MILITARY IMPORTANCE THAT ARE ENDEMIC OR EPIDEMIC IN ITS ASSIGNED GEOGRAPHICAL AREA AND TO PERFORM SUCH OTHER FUNCTIONS AS MAY BE DIRECTED BY THE BUREAU OF MEDICINE AND SURGERY.

## ...CURRENT IMPORTANT PROGRAMS

MENINGITIS STUDY. PATHOLOGY OF SCHISTOSOMIASIS.

ARTHROPOD VIRUS ISOLATIONS IN TICKS, MOSQUITOES AND SANDFLIES.

IMMUNOLOGY OF SCHISTOSOMIASIS.

VIRAL, CLINICAL, ENTOMOLOGICAL, ECOLOGICAL, AND EPIDEMIOLOGICAL ASPECTS OF RIFT VALLEY FEVER.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

VERTICAL LAMINAR FLOW & GLOVE/BOX BIOLOGICAL SAFETY CABINETS; COMPOUND, FLUORESCENT, AND PHASE CONTRAST COMPOUND MICROSCOPES; STEREOMICROSCOPES; CLINICAL, SUPERSPEED REFRIGERATED- AND ULTRACENTRIFUGES; ULTRA TRMP FREEZERS; WALK IN REFRIGERATOR & FREEZER ROOMS; LIQUID SCINTILLATION & GAMMA COUNTERS, GAS-LIQUID & HIGH-PRESSURE LIQUID CHROMATOGRAPHS; UV/VISIBLE & FLUORESCENT SPECTROPHOTOMETERS WITH GEL SAMPLERS & RAPID SAMPLERS; ELISS READERS; ANAEROBE CHAMBERS; COULTER WBC & RBC/HB COUNTERS; CLIN.CHEM. AUTO-ANALYSERS; RF/FRIG. FRACTION COLLECTORS W/ ABSORBANCE MONITORS & PROGRAMMERS; HIGH VOLTAGE, POLYACRYLAMIDE GEL, FLAT BED, IMMO & COUNTERIMMUNO ELECTROPHORESIS SYSTEMS; DENTAL OPERATORY WITH CAVITVOR, BW & PANOREX DENTAL X-RAYS & LAB.; NUCLEAR MEDICINE LAB W/ MAGNA SCANNER; CELL CULTURE & HYBRIDOMA FACILITY; AUTOCLAVES; INSECTORY; EMERG. POWER GENERATOR; PATIENT WARDS.

INSTALLATION: OCEAN R & D ACTIVITY

BAY ST.LOUIS,MS.

C.O. CAPT. G. T. PHELPS

TECH. DIR. DR. R. R. GOODMAN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	85.211	40.291
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.898	0.488
TOTAL OTHER	1.701	1.898
TOTAL ANNUAL LAB	87.805	42.622
TOTAL INHOUSE	17.818	19.741
TOTAL INHOUSE RDT&E	15.984	18.222
ANNUAL OPERATING COST	5.480	5.781

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	10	1	7	8
CIVILIAN	288	55	160	128
TOTAL	298	56	167	131

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
5	55.725	19.928	45.014	120.662	9.548	8.402

...MISSION

TO CARRY OUT A BROAD BASED RDT&E PROGRAM IN OCEAN SCIENCE AND TECHNOLOGY WITH EMPHASIS ON UNDERSTANDING OCEAN PROCESSES THROUGH MEASUREMENT AND ANALYSIS, AND THE EFFECTS OF THIS OCEAN ENVIRONMENT ON NAVY SYSTEMS AND OPERATIONS.

...CURRENT IMPORTANT PROGRAMS

ACOUSTIC BOTTOM INTERACTION TO SUPPORT SURV AND TACTICAL SYS DEV/PERF. REMOTE SENS/MESOSCALE OCEANOGRAPHY TO SUPPORT OCEAN PREDICTING AND FORECASTING. ARCTIC R&D TO SUPPORT NAVOPS. MARINE BIO R&D TO SUPPORT MATLS DEV. ENV ACOUSTIC MODELING. OCEAN PREDICT AND TECH DEV, MC&G. SEA STATE SPECTRA R&D TO SUPPORT SHIP HULL DESIGN. FINE SCALE OCEANO/CHEM FOR SSBN

...FUNCTIONS/EQUIPMENT/CAPABILITIES

WAVE CURRENT INTERACTION SIMULATOR FACILITY. INTERACTIVE DIGITAL SATELLITE IMAGE PROCESSING SYS TO HANDLE DATA FROM ALL IMAGING SATELLITES. DEEP OCEAN SEDIMENT CORE AND DREDGE SAMPLE DEPOSITORY—1728 SF. VEGA, A MULTIPURPOSE HYDROPHONE PRESSURE SENSOR KEVLAR ARRAY, CAN BE DEPLOYED IN VARIOUS MODES FOR EXPERIMENTAL MEASUREMENTS. X-RAY FLUORESCENT, TRANSMISSION AND SCANNING ELECTRON MICROSCOPE FACILITY.

INSTALLATION: OCEAN SYSTEMS CENTER

SAN DIEGO, CA.

C.O. CAPT. S. L. GUILLE

TECH. DIR. DR. H. L. BLOOD

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	187.087	281.776
TOTAL PROCUREMENT	59.207	41.718
TOTAL Q&M	48.882	49.318
TOTAL OTHER	11.827	8.986
TOTAL ANNUAL LAB	806.458	881.748
 TOTAL INHOUSE	 141.841	 177.404
TOTAL INHOUSE RDT&E	96.202	119.998
ANNUAL OPERATING COST	47.566	54.472

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	277	2	58	224
CIVILIAN	2428	177	1292	1181
TOTAL	2700	179	1845	1855

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
2728	1345.482	202.482	189.258	1737.172	45.964	134.739	

...MISSION

TO BE THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST AND EVALUATION CENTER FOR COMMAND CONTROL, COMMUNICATIONS, OCEAN SURVEILLANCE, SURFACE AND AIR LAUNCHED UNDERSEA WEAPON SYSTEMS, SUBMARINE ARCTIC WARFARE AND SUPPORTING TECHNOLOGIES.

...CURRENT IMPORTANT PROGRAMS

OCEAN SURVEILLANCE SYS WITH SOSUS UPDATE AND MULTI-SENSOR INTEGRATION, COMMAND CONTROL AND COMMUNICATIONS SYS ARCHITECTURE AND ENGINEERING, ADVANCED SURFACE AND AIR LAUNCHED UNDERSEA WEAPONS AND SURFACE ASW SYS, TECHNOLOGY DEVELOPMENTS SUCH AS ADV MARINE BIO SYS, ARCTIC SUB OPS, OCEAN ENGINEERING AND ELECTRONIC WARFARE.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CENTER FACILITIES INCLUDE ARCTIC RESEARCH FACILITY; C8 SITE, INCLUDING TACTICAL FLAG COMMAND CENTER (TFCC) AND ADVANCED COMMAND CONTROL ARCHITECTURE TEST BED (ACCAT); INTEGRATED UNDERSEA SURVEILLANCE SYSTEM (I USS) FACILITY; MICROWAVE AND MILLIMETER WAVE ANTENNA PATTERN RANGE COMPLEX; OCEANOGRAPHIC RESEARCH TOWER; STABLE SEMI-SUBMERGED PLATFORM; UNMANNED TETHERED VEHICLES INCL CURV III, SCAT, AND SNOOPY; USS DOLPHIN, EXPERIMENTAL SUB; TRANSDUCER EVALUATION CENTER; MICRO-ELECTRONICS LAB COMPLEX; ACOUSTIC SIGNAL DATA ANALYSIS AND CONVERSION SYSTEM; SIMULATION AND REAL-TIME COMPUTER FACILITIES FOR DEVELOPMENT OF OCEAN SURVEILLANCE AND ASW SYSTEMS; SHIP MOTION SIMULATOR AND A BIO-SCIENCE FACILITY ENGAGED IN RESEARCH, TRAINING AND HANDLING OF MARINE MAMMALS.

INSTALLATION: OFFICE OF NAVAL RESEARCH

WASHINGTON D.C.

C.O. RADM L. S. KOLLMORGEN      TECH. DIR. DR. JEROME A. SMITH

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	815.745	449.912
TOTAL PROCUREMENT	0.050	0.054
TOTAL O&M	51.814	55.907
TOTAL OTHER	5.923	7.826
TOTAL ANNUAL LAB	878.582	518.499
 TOTAL INHOUSE	 16.641	 17.725
TOTAL INHOUSE RDT&E	15.267	16.881
ANNUAL OPERATING COST	10.700	11.681

PERSONNEL	AUTHORIZED STRENGTH	PERSONNEL DATA (END OF FY 1981)		NON- PROF
		TOTAL PHDS	TOTAL PROF	
MILITARY	80	2	27	8
CIVILIAN	891	56	88	808
TOTAL	421	58	110	811

ACRES	SPACE AND PROPERTY				COST (MILLION \$)		
	SPACE (THOUSANDS OF SQUARE FEET)	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	0.000	84.785	2.500	87.285	0.000	0.000	

## ...MISSION

RESPONSIBLE FOR LEADERSHIP OF NAVY RESEARCH PROGRAM, MANAGEMENT AND DIRECTION OF ONR CONDUCTED RDI&E AND OF THE NAVY-WIDE PATENT PROGRAM, DEVELOPMENT OF NAVY-WIDE RDT&E FOR ASN(RES), WORLD WIDE RESEARCH INFO AND CONTRACT MGMT OF FEDERALLY FUNDED UNIVERSITY RESEARCH

## ...CURRENT IMPORTANT PROGRAMS

CONTRACT RESEARCH AND TECHNOLOGY PROGRAMS

NAVY PATENT PROGRAM

NAVY-WIDE RDT&E APPROPRIATION ADMINISTRATION

FOCAL POINT FOR WORLD-WIDE RESEARCH INFORMATION

CONTRACT MANAGEMENT PROGRAM AT EDUCATIONAL INSTITUTIONS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

ADMINISTRATION OF RESEARCH PROGRAMS IN PHYSICAL SCIENCES, MATHEMATICAL AND INFORMATION SCIENCES, BIOLOGICAL SCIENCES, PSYCHOLOGICAL SCIENCES, ARCTIC AND EARTH SCIENCES, MATERIAL SCIENCES, OCEAN SCIENCE AND TECHNOLOGY ADMINISTRATION OF TECHNOLOGY PROGRAMS IN NAVAL VEHICLE AND WEAPONS TECHNOLOGY, SENSOR AND CONTROL TECHNOLOGY, ANALYSIS AND SUPPORT. FIELD ACTIVITIES INCLUDE NRL, NORDA AND NARL IN FY1981. MAINTAINS RESEARCH RESERVE PROGRAM. COORDINATES NAVAL RESEARCH AND PROMOTES COOPERATIVE RESEARCH EFFORTS WITHIN NAVY, OTHER DOD, NSF, NASA, DEPT OF ENERGY AND OTHER GOVERNMENT RESEARCH GROUPS. SUPPORT AND ADMINISTRATION OF NAVAL RESEARCH ADVISORY COMMITTEE.

## INSTALLATION: ORDNANCE MISSILE TEST FACILITY

WHITE SANDS, N.M.

C.O. CAPT. J. T. LEWIS

CH. ENG. MR. H. L. HENDON

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981		1982
	(ACTUAL)	(ACT + EST)	
TOTAL RDT&E	6.499	5.461	
TOTAL PROCUREMENT	0.000	0.000	
TOTAL O&M	0.007	0.002	
TOTAL OTHER	2.762	2.741	
TOTAL ANNUAL LAB	9.268	8.204	
 TOTAL INHOUSE	 5.405	 4.496	
TOTAL INHOUSE RDT&E	8.189	2.548	
ANNUAL OPERATING COST	1.877	1.200	

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	86	1	28	68
CIVILIAN	54	0	9	45
TOTAL	140	1	82	108

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
85	5.200	30.589	172.382	208.071	5.542	2.925	

## ...MISSION

SUPPORT THE NAVY GUIDED MISSILE AND RESEARCH ROCKET PROGRAMS INCLUDING GROUND AND FLIGHT TESTING. ASSIST JOINT SERVICE LASER GUIDED WEAPONS COUNTERMEASURE TEST. PARTICIPATE IN THE OPERATION OF THE DOD INTEGRATED MISSILE TEST RANGE AT WHITE SANDS

## ...CURRENT IMPORTANT PROGRAMS

STANDARD MISSILE 1 AND 2/AEGIS FLIGHT TESTING  
 CRUISE MISSILE FLIGHT TESTING  
 RAM FLIGHT TESTING  
 VERTICAL LAUNCHER TESTING  
 UPPER ATMOSPHERE RESEARCH ROCKET LAUNCHING

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FLIGHT TEST TERRIER/TARTAR/STANDARD/SAM GUIDED MISSILES AND PROJECTILES  
 LAUNCH AEROBEE 150 170 200 ARIES ASTROBEE F D BLACK BRANT ORION  
 AND VARIOUS OTHER SOUNDING ROCKETS FOR UPPER ATMOSPHERIC STUDY  
 CONDUCT NAVY AIR WEAPONS TESTS  
 LAUNCH VARIOUS ROCKETS IN SUPPORT OF NASA PROJECTS  
 LAUNCH VARIOUS ROCKETS IN SUPPORT OF AIR FORCE PROJECTS  
 CONDUCT VARIOUS DEVELOPMENT TESTS FOR SSM AND SAM PROJECTS  
 PROVIDE DRONE SUPPORT AND VANDAL MISSILE HIGH SPEED TARGETS  
 ASSIST IN OPEVAL OF CRUISE MISSILE  
 MAINTAIN TARGET ECM EQUIPMENT  
 5-INCH GUIDED PROJECTILE LAUNCH CAPABILITY  
 PROVIDE WARHEAD AND EOD ANALYSIS AREA

## INSTALLATION: PACIFIC MISSILE TEST CENTER

POINT MUGU, CA.

C.O. RADM F. H. BAUGHMAN

TECH. DIR. MR. T. P. PERRY

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	176.175	195.550
TOTAL PROCUREMENT	71.758	79.350
TOTAL O&M	88.097	97.787
TOTAL OTHER	49.819	57.734
TOTAL ANNUAL LAB	885.848	480.721
 TOTAL INHOUSE	 215.981	 240.175
TOTAL INHOUSE RDT&E	114.975	127.618
ANNUAL OPERATING COST	54.060	60.162

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PRDS	TOTAL PROF	NON- PROF
MILITARY	1000	7	245	755
CIVILIAN	8645	14	944	2701
TOTAL	4645	21	1189	8456

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
27084	918.748	387.503	8610.799	4827.055	152.822	146.807

## ...MISSION

PERFORM DEVELOPMENT TEST AND EVALUATION DEVELOPMENT SUPPORT, FOLLOW-ON ENGINEERING AND LOGISTICS AND TRAINING SUPPORT FOR NAVAL WEAPONS, WEAPON SYSTEMS AND RELATED DEVICES: AND PROVIDE MAJOR RANGE TEST FACILITIES BASE SUPPORT FOR FLEET OTHER DOD AND GOVERNMENT AGENCY USERS

## ...CURRENT IMPORTANT PROGRAMS

HARPOON ANTI-SHIPPING MISSILE

F-14 TACTICAL SOFTWARE

IMPROVED PHOENIX AIR-TO-AIR MISSILE

TRIDENT SUBMARINE LAUNCHED BALLISTIC MISSILE

TOMAHAWK CRUISE MISSILE

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

LABORATORIES FOR WEAPON SYSTEMS SIMULATIONS SYSTEM INTEGRATION, ELECTRONIC WARFARE ENVIRONMENTAL SIMULATIONS, TACTICAL SOFTWARE SUPPORT, ANECHOIC MEASUREMENTS. 45000 SQUARE MILE AIR AND SURFACE TRACKING RANGE FPS-16 FPQ-10, FPQ-12 AND MPS-25 RADARS, THEODOLITES AND CINE-SEXTANTS P, L AND S BAND TELEMETRY RECEIVE, RECORD AND DISPLAY SYSTEMS. DATA REDUCTION FACILITIES FOR REAL TIME AND POST OPERATIONS. MISSILE AND TARGET LAUNCH FACILITIES WITH COMMAND CONTROL AND FLIGHT TERMINATION CAPABILITY. SHIP MOTION SIMULATOR, ALL-UP ROUND MISSILE TEST FACILITY AND ORDNANCE ASSEMBLY BUILDINGS. POINT MUGU NAVAL AIR STATION. 700 SQUARE MILE, 400-6000 FATHOM THREE DIMENSIONAL UNDERWATER TRACKING RANGE. MK-80 UNDERWATER TARGET LAUNCH AND RECOVERY SYSTEMS.

INSTALLATION: PERSONNEL RESEARCH & DEVELOPMENT CENTER

SAN DIEGO, CA.

C.O. CAPT. J. F. KELLY

TECH. DIR. DR. J. J. REGAN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	18.899	17.050
TOTAL PROCUREMENT	0.548	0.000
TOTAL O&M	2.688	2.985
TOTAL OTHER	1.684	1.576
TOTAL ANNUAL LAB	28.819	21.611
 TOTAL INHOUSE	 12.651	 14.171
TOTAL INHOUSE RDT&E	10.054	10.680
ANNUAL OPERATING COST	8.858	4.056

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	29	0	12	17
CIVILIAN	288	84	214	74
TOTAL	817	84	226	91

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1	65.860	7.080	0.000	72.940	0.485	4.682

...MISSION

PRINCIPLE NAVY ACTIVITY FOR CONDUCTING HUMAN RESOURCES RDTE IN THE AREAS OF MANPOWER, PERSONNEL, EDUCATION & TRAINING AND TO SERVE AS THE COORD ACTIVITY FOR ALL SUCH NAVY R&D. PROVIDE SUPPORT TO THE NAVY SYSTEMS COMMANDS TO AUGMENT & STIMULATE HUMAN FACTORS EFFORTS IN NEW SYSTEM DESIGN

...CURRENT IMPORTANT PROGRAMS

PERSONNEL AND TRAINING TECHNOLOGY

MANPOWER CONTROL SYSTEM DEVELOPMENT

EDUCATION AND TRAINING

TRAINING DEVICE PROTOTYPE DEVELOPMENT

MANAGEMENT SYSTEMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

IBM 4331 COMPUTER SYSTEM WITH COMMUNICATIONS CAPABILITY TO OTHER COMPUTERS, PDP11/70 WITH ARPANET ACCESS WHICH SUPPORTS THE NAVY LABORATORY COMPUTER NETWORK, PDP 11/45, BIOTECHNOLOGY DATA ACQUISITION SYSTEMS, VARIOUS CRT AND PRINTING DEVICES INTERFACING WITH THE NAVAL OCEAN SYSTEMS CENTER UNIVAC 1100/82 COMPUTER

INSTALLATION: RESEARCH LABORATORY

WASHINGTON, D.C.

C.O. CAPT. J. A. MCMORRIS II DIR. OF RSCH. DR. ALAN BERMAN

PROGRAM	PROGRAM DATA BY FISCAL YEAR (MILLION \$)	
	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	283.748	255.850
TOTAL PROCUREMENT	8.084	8.825
TOTAL O&M	18.170	14.880
TOTAL OTHER	22.474	24.480
TOTAL ANNUAL LAB	277.474	303.085
 TOTAL INHOUSE	179.441	195.170
TOTAL INHOUSE RDT&E	151.985	165.975
ANNUAL OPERATING COST	61.889	68.445

PERSONNEL	PERSONNEL DATA (END OF FY 1981)		NON- PROF
	AUTHORIZED STRENGTH	TOTAL PHDS	
MILITARY	140	1	85
CIVILIAN	8115	806	1888
TOTAL	8255	807	1878

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)			TOTAL	REAL PROP	EQUIP
LAB	ADMIN	OTHER				
919	2818.975	192.677	481.945	2988.597	98.184	118.892

...MISSION

TO CONDUCT A BROADLY BASED MULTIDISCIPLINARY PROGRAM OF SCIENTIFIC  
RESEARCH AND ADVANCED TECHNOLOGICAL DEVELOPMENT DIRECTED TOWARD NEW AND  
IMPROVED MATERIALS, EQUIPMENT, TECHNIQUES, SYSTEMS, AND RELATED  
OPERATIONAL PROCEDURES FOR THE NAVY

...CURRENT IMPORTANT PROGRAMS

DIRECTED ENERGY DEVICES

ADVANCED ECM AND DECOYS FOR NAVY EW SYSTEMS

ADVANCED ACOUSTIC AND NON-ACOUSTIC SUBMARINE DETECTION PROGRAM

SATELLITE PROGRAMS

ADVANCED HIGH PERFORMANCE MATERIALS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PRINCIPAL RESEARCH AND DEVELOPMENT LABORATORY OF THE NAVY. PRIMARY AREAS  
ARE MATERIALS SCIENCE AND TECHNOLOGY, SPACE SCIENCE AND TECHNOLOGY,  
RADAR, ELECTRONIC WARFARE, LASER TECHNOLOGY, OPTICS, OPTICAL WARFARE,  
ELECTRONIC DEVICES, PLASMA AND NUCLEAR PHYSICS, INTELLIGENCE SUPPORT,  
UNDERSEA SURVEILLANCE, ENVIRONMENTAL SCIENCE AND TECHNOLOGY. MAJOR  
FACILITIES INCLUDE ONE SHIP FOR ACOUSTIC AND NON-ACOUSTIC ASW RESEARCH,  
BATHYMETRY, AND DEEP OCEAN SEARCH. MAJOR ACOUSTIC STANDARD AND  
CALIBRATION FACILITIES. HIGH LEVEL RADIATION LABORATORY. THREE NUCLEAR  
PARTICLE ACCELERATORS. DIVERSE HIGH ENERGY LASERS. 200 KILOGAUSS HIGH  
FIELD MAGNET FACILITY. SPACE SIMULATION FACILITIES. MAJOR PLASMA PHYSICS  
FACILITIES. ELECTRONIC WARFARE CENTRAL TARGET SIMULATOR.

## INSTALLATION: SUBMARINE MEDICAL RESEARCH LABORATORY

GROTON, CT.

C.O. CAPT. W. C. MILROY

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	2.272	2.211
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.020	0.020
TOTAL OTHER	0.810	0.928
TOTAL ANNUAL LAB	8.162	8.154
 TOTAL INHOUSE	 8.062	 8.154
TOTAL INHOUSE RDT&E	2.282	2.211
ANNUAL OPERATING COST	0.728	0.815

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	88	8	14	24
CIVILIAN	56	10	24	32
TOTAL	94	18	88	56

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL. PROP	EQUIP	
1	40.514	14.099	0.000	54.613	1.815	1.842	

## ...MISSION

TO CONDUCT MEDICAL RESEARCH AND DEVELOPMENT AS IT RELATES TO SUBMARINE, SHIPBOARD, DIVING AND AMPHIBIOUS ENVIRONMENTS.

## ...CURRENT IMPORTANT PROGRAMS

COMPUTER ASSISTED DIAGNOSIS PROGRAMS FOR CORPSMEN ABOARD NUCLEAR SUBS. AUDITORY AND VISUAL T AND E OF SUBMARINERS AND DIVERS. PHYSIOLOGICAL PSYCHOLOGICAL RESEARCH IN COLD WEATHER. HUMAN FACTORS VISION AUDITORY RSCH IN ADVANCED SONAR SYSTEMS AND HUMAN FACTORS SUB INFO PROCESSING. HEALTH AND LONGEVITY OF NUCLEAR SUBMARINE CREWS. NUC SUB ATMOSPHERE EVAL.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

BASIC AND APPLIED RESEARCH COMPETENCE IN CARDIOPULMONARY, THERMAL, AND HYPERBARIC PHYSIOLOGY, BIOCHEMISTRY, AUDITION, VISION, HUMAN FACTORS ENG, HYPERBARIC AND MECHANICAL SERVICES, ELECTRICAL INSTRUMENTATION AND REPAIRS, COMPUTER APPLICATIONS, ANIMAL SCIENCES, TECHNICAL LIBRARY, GRAPHIC ARTS, PHOTOGRAPHY, MODEL MAKING, HYPERBARIC CHAMBERS, HUMAN-150 PSI ANIMAL-800 PSI AND 1000 PSI, SURGICAL SUITE, COMPUTER APPLICATION FACILITY, CLOSED CIRCUIT TV SYSTEM, GAS CHROMATOGRAPHS, EEG, DOPPLER SYSTEM, SONAR STACK SIMULATION TEST SYSTEM, FLUIDIC CONTROL CONSOLE, RESPIRATORY MASS SPECTROMETER.

INSTALLATION: SURFACE WEAPONS CENTER

SILVER SPRING, MD.

C. O. CAPT. J. E. FERNANDES

TECH. DIR. H. S. VAUGHN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	252.688	268.894
TOTAL PROCUREMENT	52.616	80.378
TOTAL O&M	50.408	47.083
TOTAL OTHER	83.578	29.911
TOTAL ANNUAL LAB	389.285	876.711
TOTAL INHOUSE	177.721	204.718
TOTAL INHOUSE RDT&E	110.226	181.886
ANNUAL OPERATING COST	78.726	88.509

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PIIDS	TOTAL PROF	NON- PROF
MILITARY	116	8	29	87
CIVILIAN	4479	228	2054	2425
TOTAL	4595	231	2088	2512

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
5848	1627.548	180.247	1808.584	8091.329	100.847	180.978	

...MISSION

THE PRINCIPAL NAVY RESEARCH, DEVELOPMENT, TEST AND EVALUATION CENTER FOR SURFACE SHIP WEAPONS SYSTEMS, ORDNANCE, MINES, AND STRATEGIC SYSTEMS SUPPORT

...CURRENT IMPORTANT PROGRAMS

STRATEGIC SYSTEMS-TRIDENT, POSEIDON, MK500, MISSILE MATERIALS, TARGETING. COMBAT SYSTEMS-AEGIS, DDGX, CV/CVN, CGN-88, DDG-993, DD-968, SURF SHIPS. WEAPON SYSTEMS-TOMAHAWK, SM-2, GUIDED PROJECTILE, HI POWER RADIATION. UNDERWATER SYSTEMS-CAPTOR, QUICKSTRIKE MINES, MK48(ADCAP), WARHEADS. ELECTRONIC SYSTEMS-SLQ-82, SLQ-17, AN/SPY-1, NUCLEAR WPNS EFFECTS, OTH.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES INCLUDE-WIND TUNNELS UP TO MACH 18, 1.75 MILLION GAL. HYDROBALLISTIC TANK, MAGNETIC SILENCING FACILITY, FBM DISCPAC PRODUCTION FACILITY, FACILITIES FOR ASSURANCE OF COMPUTER PROGRAMS FOR STRATEGIC AND TACTICAL MISSILES, INTELLIGENCE PROCESSING SYS, GUN AND MISSILE RANGE INCLUDING LAND-BASED DEVELOPMENT SITES FOR WEAPON CONTROL SYSTEMS, ELECTROMAGNETIC EFFECTS FACILITIES FOR NUCLEAR AND NON-NUCLEAR EFFECTS, FACILITIES FOR WARHEAD CHARACTERIZATION AND DAMAGE TO TARGETS, DEV AND TEST FACILITIES FOR LASER AND ELECTRO-OPTICS SUBSYSTEMS, DEEP WATER OFFSHORE FACILITIES FOR MINE SYS, MOBILE TACTICAL WAR GAMES FAC, EXPLOSIVES DEV FACILITIES, EXTENSIVE SCIENTIFIC COMPUTER FACILITY, FUZES, EXPLOSIVES, MATERIALS AND MARINE CORPS SUPPORT FACILITIES

## INSTALLATION: UNDERSEA RANGES DEPARTMENT

NEWPORT, RI.

C.O. CAPT. J. W. AILES

TECH. DIR. DR. C. NICHOLAS PRYOR

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	29.347	36.994
TOTAL PROCUREMENT	0.886	0.856
TOTAL O&M	9.072	9.100
TOTAL OTHER	1.987	2.104
TOTAL ANNUAL LAB	41.042	48.554
 TOTAL INHOUSE	28.819	31.594
TOTAL INHOUSE RDT&E	28.274	28.925
ANNUAL OPERATING COST	0.000	0.000

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON-
				PROF
MILITARY	44	0	4	40
CIVILIAN	42	0	27	15
TOTAL	86	0	81	55

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROF	EQUIP
1042	82.180	12.464	811.500	406.094	25.808	1.441

## ...MISSION

TO PROVIDE DEEP WATER DEV AND OPRNL TAE FACILTS FOR UNDRWTR ACOUSTIC MEASUREMENTS, TESTING, AND CALBRNG SONRS. PROVIDE ACURAT UNDPWTR. SURFCE AND IN-AIR TRACKING DATA ON SHIPS, SUBS, AIRCRAFT AND WEAPON SYSTEMS.

## ...CURRENT IMPORTANT PROGRAMS

MK48 WEAPON SYSTEMS TRAINING CERTIFICATION PROGRAM

SIIP SILENCING PROGRAM

FLEET TRAINING/SUEROC, SUBEX, SHAREM

TORPEX/RANGFX

R&amp;D TESTS/CAPTOR/MF SONAR/TOWED ARRAYS/LAMPS/BQQ 5/LICASS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

HIGHLY ADVANCED AND INSTRUMENTED ASW WEAPONS, SONAR, AND FORACS TEST MEASUREMENT RANGES IN SUPPORT OF NAVY ASW AND UNDERSEA R&D PROGRAMS, AND ASW FLEET ASSESSMENT AND OPERATIONAL READINESS.

INSTALLATION: UNDERWATER SYSTEMS CENTER

NEWPORT, RI.

C. O. CAPT. J. W. AILES

TECH. DIR. DR. L. NICHOLAS PRYOR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	152.681	189.684
TOTAL PROCUREMENT	86.901	86.830
TOTAL OEM	79.684	84.265
TOTAL OTHER	38.154	19.517
TOTAL ANNUAL LAB	332.870	380.116
TOTAL INHOUSE	182.505	146.149
TOTAL INHOUSE RDT&E	67.298	81.605
ANNUAL OPERATING COST	42.711	52.876

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	79	0	56	28
CIVILIAN	2869	88	1885	1284
TOTAL	2748	88	1441	1807

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
867	1096.100	240.615	461.499	1798.214	49.909	84.828

...MISSION

TO BE THE PRINCIPAL NAVY RDT&E CTR FOR SUBMARINE WARFARE AND SUBMARINE WEAPON SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

ADVNCD TECHNGY IN U/W ACOUTCS, INFO PROCSNG, WEAPONRY.

DESZN, DEV & EVAL U/W COMBAT SUB SYSTEMS INCNDG SUBACS & SURF SHIP SONAR.  
RDT&E FOR OVERALL U/W COMBAT (TRIDENT, 688, ETC.).

DESZN, DEV&EVAL OF LAUNCHERS, U/W TARGET SYS & MOBILE/FIXD U/W TEST RANGES  
INTRODUCE TO FLEET AND IN-SERV ENGINEERING OF MK48 & DEV OF MK48 ADCAP.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PRIMARY IN-HSE R&D CAPABLITY FOR NAVY U/W COMBAT SYSTEMS, SUBSYSTEMS AND  
TECHNLGYS FOR SONAR SYSTEMS (HULL-TOWD/SUB COMCTNS SYSTEMS INTEBRTN/SUB  
ANTNA SYSTEMS). U/W WPN RANGE TECHNLGY/REDINESS OF IN-SERVICE SHIPBOARD U/  
W SYSTEMS/ASW SUP. TORPEDO TEST RANGES(FIXD/PORTBLE)SHLOW AND DP WTR ASW  
WPN FIRE CNTRL R&D FACILTY. ASW WPN LAUNCHNG DEVICE R&D FACILTY. QLTY ENG,  
EVAL&RELIABLTY LAB. BERMUDA RSCH FACILTY, TORPDO PROPULSN TEST FACILTY, ELECT  
MAGNTIC FACILTY, SYS CERTCTN AND INTBTN FACILTY, ACOUSTC MSRMT & XDUCER R&E  
FACILTY, TORPDO TEST RANGE.

INSTALLATION: WEAPONS CENTER

CHINA LAKE, CA.

C.O. CAPT. J. J. LAHR

TECH. DIR. MR. R. M. HILLYER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	202.848	280.468
TOTAL PROCUREMENT	75.274	72.580
TOTAL O&M	85.677	24.118
TOTAL OTHER	48.765	44.707
TOTAL ANNUAL LAB	857.059	871.818
TOTAL INHOUSE	190.200	215.868
TOTAL INHOUSE RDT&E	119.170	188.249
ANNUAL OPERATING COST	57.972	61.518

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	581	1	41	520
CIVILIAN	8891	122	1879	2512
TOTAL	4452	123	1420	8082

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1185711	1195.457	429.280	4484.841	6109.078	288.689	111.769

...MISSION

THE PRINCIPAL NAVY RDT&E CENTER FOR AIR WARFARE SYSTEMS (EXCEPT ANTI-SUBMARINE WARFARE SYSTEMS) AND MISSILE WEAPON SYSTEMS, AND THE NATIONAL RANGE/FACILITY FOR PARACHUTE TEST AND EVALUATION.

...CURRENT IMPORTANT PROGRAMS

ANTI-AIR MISSILES AIM-9L/M SIDEWINDER, AIM/RIM-7F/M SPARROW, MSL COMPNTS  
ANTI-SURFACE WPNS A/RGM-84 HARPOON, FAR, ADV. TACTICAL MISSILES. ELECTRONIC WARFARE AGM-88 HARM MISSILE, SIMULATION, EQUIPTS AND TACT EVALS  
TAC A/C SYSTEMS INTEGRATION A-7E, A-6E, AV-8B, F/A-18, AIRCREW EQUIPMNTS  
T AND E AIR/SURFACE-LAUNCHED WPNS, TACTICS, A/C WPN SYSTEMS, SUB/SYSTEMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT IN-HOUSE RESEARCH AND ESTABLISH AND MAINTAIN PRIMARY IN-HOUSE DEVELOPMENT, TEST, EVALUATION, AND IN-SERVICE ENGINEERING SUPPORT FOR SPECIFIC NAVY, MARINE CORPS AND JOINT SERVICE PRODUCTS SUCH AS ANTI-AIR MISSILES, ANTI-SURFACE WEAPONS, DEFENSE PENETRATION SYSTEMS, INTEGRATED TACTICAL AIRCRAFT SYSTEMS. FACILITIES INCLUDE MICHELSON LAB, ELECTRONIC WARFARE THREAT ENVIRONMENT SIMULATION, SOLID STATE DEVICE LAB, ENCOUNTER SIMULATION LAB, PROPULSION RESEARCH LAB, MICROELECTRONICS FACILITY, EXPLOSIVES R&D FACILITIES, GROUND AND AIRCRAFT RANGES, EXTERIOR AND TERMINAL BALLISTICS RANGES, ARMITAGE AIR FIELD, PARACHUTE TEST TOWERS, SUPERSONIC TEST TRACKS, MICROWAVE ANECHOIC FACILITIES, HARDWARE-IN-THE-LOOP SIMULATIONS, AND LASER/ELECTRO-OPTICS LAB.

## INSTALLATION: WEAPONS EVALUATION FACILITY

ALBUQUERQUE, N.M.

C.O. CAPT. D. R. WEICHMAN

TECH. DIR. MR. E. G. GREGORY

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	2.998	4.165
TOTAL PROCUREMENT	0.747	0.820
TOTAL Q&M	2.290	2.849
TOTAL OTHER	8.604	4.547
TOTAL ANNUAL LAB	9.549	12.181
 TOTAL INHOUSE	 8.892	 11.296
TOTAL INHOUSE RDT&E	2.480	3.558
ANNUAL OPERATING COST	1.484	1.684

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		TOTAL PROF	NON- PROF
		PHDS	PROF		
MILITARY	121	0	21	21	100
CIVILIAN	105	2	60	60	45
TOTAL	226	2	81	81	145

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
7	0.400	58.592	94.926	148.918	9.600	1.118

## ...MISSION

SUPPORT NAVY NUCLEAR WEAPON DEVELOPERS. ADMINISTER THE NAVY NUCLEAR WEAPONS SAFETY PROGRAM. ASSIST THE PRESIDENT, BOARD OF INSPECTION AND SURVEY. IMPROVE THE SURVIVABILITY OF AIRCRAFT AND WEAPONS IN NUCLEAR EFFECTS. SUPPORT THE NAVY LASER PROGRAM AT THE AIR FORCE WEAPONS LAB.

## ...CURRENT IMPORTANT PROGRAMS

ASSISTED IN EARLY DEVELOPMENT OF A STAND-OFF WEAPON AND AN AIR-TO-AIR WEAPON. ASSISTED IN THE FAANTAE EMP TEST OF 2 NAVY AIRCRAFT. CONDUCTED STUDIES ON THE SURVIVABILITY OF NAVY AIRCRAFT AND CREW IN NUCLEAR ENVIRONMENTS. CONDUCTED THE NAVY HIGH ENERGY LASER PROJECT AT THE AIR FORCE WEAPONS LAB. IMPROVED TECHNIQUES FOR ANALYZING WEAPON SYSTEMS CIRCUITRY

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

4 A-7, 2 F-14, 1 OV-10, AND 2 U-8 AIRCRAFT. 15 ORDNANCE STORAGE LOCKERS. A SECURE STORAGE VAULT. WEAPON LOADING CAPABILITY FOR A WIDE VARIETY OF ORDNANCE. HOT-COLD CHAMBER FOR ORNANCE TEST. TELEMETRY AND ON-BOARD-AIRCRAFT PHOTO AND TAPE RECORDING EQUIPMENT. PERKIN-ELMER 7/32 COMPUTER. WANG 2200 COMPUTER. AS A KIRTLAND AIR FORCE BASE TENANT ACCESS TO THE CRAY-2, CYBER 176, AND CDC 6600 COMPUTERS, ALECS, ARES, TRESTLE, AND OTHER EMP FACILITIES. GENERAL SEVERE ENVIRONMENT FACILITIES. HIGH ENERGY LASER LAB INCLUDING THE AIRBORNE LASER LAB. SHOCK-BLAST FACILITY. NEARBY ARE THE FOLLOWING. WHITE SANDS MISSILE RANGE, SANDIA LBS, LOS ALAMOS NATIONAL LAB, ALL WITH AVAILABLE EXTENSIVE TEST FACILITIES. AT NWEF THE FOLLOWING CAPABILITIES; SAFETY ANALYSIS AND EVALUATION. BOARD OF INSPECTION AND SURVEY ON NUCLEAR WEAPONS. DEVELOP WEAPON LOADING CHECK LISTS

## INSTALLATION: AERO PROPULSION LABORATORY

WPAFB, OH.

CDR. COL. GEORGE E. STRAND

CH. SCI. DR. EDWARD T. CURRAN

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	124.219	129.178
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.124	1.281
TOTAL ANNUAL LAB	125.843	130.459
 TOTAL INHOUSE	 15.740	 16.998
TOTAL INHOUSE RDT&E	14.816	14.712
ANNUAL OPERATING COST	8.568	8.600

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	45	4	86	9
CIVILIAN	838	28	214	124
TOTAL	883	30	250	138

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
40	229.490	41.784	105.665	876.989	66.100	29.568

## ...MISSION

PLAN AND EXECUTE RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT, AND PROTOTYPE DEVELOPMENT PROGRAMS IN AIRBREATHING PROPULSION, AEROSPACE POWER, FUELS AND LUBRICATION, AND AIRCRAFT FIRE PROTECTION. CONDUCT CONTRACT AND IN-HOUSE PROGRAMS. PROVIDE OPERATIONAL AND SYSTEMS SUPPORT.

## ...CURRENT IMPORTANT PROGRAMS

ADVANCED TURBINE ENGINE TECHNOLOGY DEMONSTRATORS  
 OPTIMIZE AVAILABILITY AND COST OF AVIATION TURBINE FUELS  
 VARIABLE CYCLE ENGINES FOR MULTI-MISSION AIRCRAFT  
 RAMJET TECHNOLOGY FOR TACTICAL AND STRATEGIC MISSILES  
 SPACE AND AIRBORNE HIGH POWER GENERATION AND CONDITIONING

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TURBINE ENGINE CONTROLS TEST FAC, BATTERY DEVELOPMENT AND TEST FAC, MHD GENERATOR, LUBE TEST RIGS, SEAL TEST RIGS, BEARING TEST RIGS, FUEL HANDLING FAC, FIRE RESEARCH LAB, COKER LAB, FUEL ANALYSIS LAB, COMBUSTION FAC, ROTOR TEST FAC, 6 SEA LEVEL TEST STANDS TO 60,000 LBS THRUST, 2 TURBINE ENGINE ALTITUDE CELLS TO 5,000 LBS THRUST, MACH 1.5, 50,000 FT 2 PROPELLER WHIRL RIGS TO 10,000 HP, DIRECT CONNECT RAMJET TEST FAC, RAMJET COMPONENTS LAB, ELECTRO-AERODYNAMIC LASER, HIGH TEMPERATURE TURBINE COMPONENT TEST FAC, AIRCRAFT ELECTRICAL POWER FAC WITH THREE, 850 HP DRIVES AND AIRCRAFT SIMULATORS, VACUUM CHAMBERS, SUPERCONDUCTIVITY LAB, HIGH POWER LAB TO 5 MW, THERMAL ENERGY STORAGE LAB, HYDRAULICS LAB, PLASMA PHYSICS LAB, LASER HOLOGRAPHY LAB, COMPRESSOR TEST FAC, SOLAR CELL LAB.

INSTALLATION: AEROSPACE MEDICAL RESEARCH LABORATORY

WPAFB, OH.

CDR. COL. GEORGE C. MOHR

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	17.009	16.658
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.167	0.000
TOTAL OTHER	1.846	5.901
TOTAL ANNUAL LAB	18.622	22.559
 TOTAL INHOUSE	10.785	10.484
TOTAL INHOUSE RDT&E	9.789	9.776
ANNUAL OPERATING COST	0.750	0.750

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	186	20	56	80
CIVILIAN	155	25	99	56
TOTAL	291	45	155	136

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)	
	LAB	AEMIN	OTHER	TOTAL	REAL PROP
80	97.955	1.789	200.005	299.699	10.904

## ...MISSION

ACCOMPLISH BEHAVIORAL AND BIOMEDICAL RESEARCH AND DEVELOPMENT TO DEFINE HUMAN TOLERANCE AND DEGRADATION OF HUMAN PERFORMANCE UNDER THE CONDITION OF ENVIRONMENTAL STRESS ASSOCIATED WITH AEROSPACE OPERATIONS AND PROVIDE SUPPORT TO SYSTEM DEVELOPMENT IN THE ABOVE AREAS.

## ...CURRENT IMPORTANT PROGRAMS

DEFINE TOXIC HAZARDS, ENVIR POLLUTION FFF OF MISSLE OPS-PROPELLANT TEST.  
 DEFINE EFFECT OF CREW PERF ON MANNED WEAPON SYSTEM EFFECTIVENESS.  
 DEV OPTICAL COUNTERMEASURE MECHANISMS FOR ADV DEV PROGRAM APPLICATIONS.  
 EFF OF OPERATIONAL NOISE AND VIBRATION ENVIRONMENTS ON AF PERSONNEL-OPS.  
 DEVELOP HUMAN PERFORMANCE ESTIMATES IN CHEMICAL WARFARE ENVIRONMENTS.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

HUMAN DECELERATION SYSTEM TO SIMULATE THE COMPLEX ACCELERATION ENVIRON ASSOCIATED WITH EJECTION AND CRASH LANDING. DYNAMIC ENVIRONMENT SIMULATOR A SIX DEGREE OF FREEDOM MAN-RATED CENTRIFUGE USED TO SIMULATE SUSTAINED ACCELERATIONS SUCH AS THOSE ENCOUNTERED IN AIR COMBAT MANEUVERING. THOMAS DOMES-EIGHT ALTITUDE EXPOSURE CHAMBERS TO SIMULATE EXOTIC ARTIFICIAL ATMOSPHERIC CONDITIONS. STRATEGIC AND TACTICAL COCKPIT SIMULATION FACILITIES USED TO PERFORM REAL-TIME MAN-IN-THE-LOOP EXPERIMENTS. ANECHOIC AND REVERBERATION CHAMBERS TO ENABLE EXPERIMENTAL INVESTIGATIONS OF POTENTIALLY HAZARDOUS NOISE TO DETERMINE EFFECTS ON BODY FUNCTION AND PERFORMANCE. VIVARIUM-LABORATORY RESEARCH ANIMAL FACILITY.

INSTALLATION: ARMAMENT DIVISION

EGLIN AFB, FL.

CDR. MAJ. GEN. W. B. MAXSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	456.973	606.529
TOTAL PROCUREMENT	250.696	124.711
TOTAL O&M	11.046	9.402
TOTAL OTHER	100.295	112.101
TOTAL ANNUAL LAB	819.010	852.743
TOTAL INHOUSE	259.611	311.394
TOTAL INHOUSE RDT&E	171.476	207.771
ANNUAL OPERATING COST	84.495	85.362

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	4719	20	571	4148
CIVILIAN	3095	85	701	2394
TOTAL	7814	55	1272	6542

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
463588	320.295	1020.924	10765.171	12106.390	821.728	168.727

...MISSION

WEAP, ELEC-OPTICAL WEP DEV, A/C GUN, AMMO, RELATED EQUIP. RESPON FOR BASIC TECHNOLOGY, DEVEL, TEST, INITIAL ACQ AND DEPLOY. TEST MISSION INCL LEAD CENTER IN MUN, EMW, INTRUSION/INTERDICTION, AND CLIMACTIC SIMULATION.

...CURRENT IMPORTANT PROGRAMS

WIDE AREA ANTI-ARMOR MUNITION

PRECISION GUIDANCE MUNITIONS

ADVANCED MEDIUM RANGE AIR TO AIR MISSILE

COMBINED EFFECTS MUNITION

RESPONSIBLE FOR AIR-LAUNCH TACTICAL AND DEF MSLS; NONNUC MUN

...FUNCTIONS/EQUIPMENT/CAPABILITIES

SCIENTIFIC/ENGINEERING PERSONNEL AND LABORATORY FACILITIES CAPABLE OF EXPLOR, ADV, & ENG DEV OF NONNUCLEAR MUNITIONS & EQUIP. ARMAMENT SYSTEM TEST ENVIRONMENT COVERING 725SQ MI WITH LARGE ADJACENT WATER AREA; HAS 28 TEST AREAS WITH INSTRUMENTED FACILITIES INCLUDING PRECISION TRACKING RADAR AND PHOTO-OPTICS; IS USED FOR MUNITION TESTING AND ELECTRO MAGNETIC TEST ENVIRONMENT; AN INSTRUMENTED COMPLEX OF THREAT SYSTEMS FOR EVAL WPN SYST EFFECTIVENESS; PROVIDES A REALISTIC ENVIRONMENT FOR TESTING A WPN SYST AGAINST AN ACTIVE DEFENSE SYSTEM; A CLIMATIC LAB CAPABLE OF TESTING COMPLETE WPN SYST, A COMPUTER SCIENCE LAB, A PHYSICAL SCIE.LAB A PHOTO LAB, AN INSTRUMENTATION/R/D FACILITY, & A MISSILE SIMULATION AND TEST LAB.

INSTALLATION: ARNOLD ENGINEERING DEVELOPMENT CENTER

TULLAHOMA, TN.

CDR. COL. KENNETH R. JOHNSON

CH. SCI. DR. BRUCE REESE

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	161.147	175.928
TOTAL PROCUREMENT	0.000	0.000
TOTAL Q&M	0.007	0.012
TOTAL OTHER	14.259	5.115
TOTAL ANNUAL LAB	175.418	181.061
 TOTAL INHOUSE	26.585	26.981
TOTAL INHOUSE RDT&E	28.769	28.687
ANNUAL OPERATING COST	26.598	32.462

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	158	4	62	91
CIVILIAN	207	5	57	150
TOTAL	860	9	119	241

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
89081	1093.540	207.876	2026.055	3227.471	890.754	60.851

...MISSION

PRIMARY MISSION IS TO PROVIDE ENVIRONMENTAL TEST SUPPORT TO SYSTEMS DEVELOPMENT AND RESEARCH AND DEVELOPMENT PROGRAMS OF DOD AND TO KEEP EXISTING FACILITIES MODERN TO PROVIDE ADVANCED FACILITIES AS REQUIRED, AND TO CONTINUALLY DEVELOP ADVANCED TEST TECHNIQUES AND INSTRUMENTATION.

...CURRENT IMPORTANT PROGRAMS

MX TESTING INCLUDING AERODYNAMICS, STAGE SEPARATION AND ENGINE FIRING  
AIR LAUNCH CRUISE MISSILE ENGINE AND AERODYNAMIC TEST SUPPORT  
F100 ENGINE COMPONENT IMPROVEMENT PROGRAM TESTING  
ENGINE MODEL DEFINITIVE PROGRAM AERODYNAMIC AND ENGINE TEST CELLS  
ABRES-IMPACT RANGES, VACUUM CHAMBERS, ABLATION AND AERODYNAMIC TESTING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AEDC IS COMPRISED OF ABOUT 85 TEST UNITS. INCLUDED ARE WIND TUNNELS WITH TEST SECTIONS TO 16 FT SQ AND SPEED FROM SUBSONIC TO MACH 20; TURBINE ENGINE TEST CELLS WHICH PROVIDE SIMULATION TO MACH 8, ROCKET TEST CELLS, THE LARGEST RATED AT .5 MILLION LBS THRUST AT ALTITUDE; SPACE SIMULATION CHAMBERS TO 42 FT DIA AND 82 FT HIGH; HYPERBALLISTIC RANGES; DUST & SNOW EROSION FACILITY; BIRD IMPACT FACILITY; TWO CAPTIVE TRJECTORY SYSTEMS. THESE FACILITIES HAVE SUPPORTED DEVELOPMENT AND QUALIFICATION OF MOST MAJOR AERONAUTICAL, MISSILE, AND SPACE SYSTEM DEVELOPMENT SINCE 1954. THIS TESTING COMPLEMENTS EXPENSIVE AND OFTEN HAZARDOUS FLIGHT TESTING AND ASSURES THAT SYSTEM DEFICIENCIES ARE FOUND EARLY, SAVING TIME AND RESOURCES IN THE OVERALL DEVELOPMENT, ACQUISITION AND DEPLOYMENT PROCESS.

## INSTALLATION: AVIONICS LABORATORY

WPAFB, OH.

CDR. COL. BARTON KRAWKZ

CH. SCI. DR. JESSI C. RYLES

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	157.568	174.075
TOTAL PROCUREMENT	0.000	0.000
TOTAL OEM	0.000	0.000
TOTAL OTHER	2.860	3.260
TOTAL ANNUAL LAB	160.428	177.835
 TOTAL INHOUSE	22.804	25.268
TOTAL INHOUSE RDT&E	19.944	22.008
ANNUAL OPERATING COST	4.051	4.500

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		TOTAL PROF	NON- PROF
		PHDS	PROF		
MILITARY	159	5	111	48	
CIVILIAN	604	40	410	194	
TOTAL	763	45	521	242	

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
229	229.378	9.494	405.264	644.131	84.482	75.606	

## ...MISSION

MAINTAINS AN AVIONICS TECHNOLOGY BASE THROUGH RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT AND ASSIGNED BASIC RESEARCH PROGRAMS. DEVELOPS AND DEMONSTRATES COST-EFFECTIVE AVIONICS CONCEPTS TO REDUCE ACQUISITION AND OPERATING COSTS AND IMPROVE OPERATIONAL CAPABILITIES.

## ...CURRENT IMPORTANT PROGRAMS

VERY HIGH SPEED INTEGRATED CIRCUITS TECHNOLOGY

SYNTHETIC APERTURE/BISTATIC RADAR

GALLIUM ARSENIDE POWER SOURCES FOR MICROWAVE APPLICATIONS

MONOPULSE RADAR COUNTERMEASURES

AUTOMATIC TARGET CLASSIFICATION

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TECHNICAL AREAS INCLUDE FIRE CONTROL, WEAPON DELIVERY, COMMUNICATIONS, ELECTRONIC WARFARE, NAVIGATION, SURVEILLANCE, RECONNAISSANCE, INFO PROCESSING AND CONTROL, SUBSYSTEMS, INTEGRATION AND SYSTEMS ARCHITECTURE, SUPPORTING ELECTRONIC DEVICES. INHOUSE LABS INCLUDE SIMULATION AND ANALYSIS OF INTEGRATED DIGITAL SYSTEMS DESIGN AND FABRICATION OF SPECIALIZED INTEGRATED/HYBRID CIRCUITS AND PRINTED WIRING BOARDS, PERFORMANCE EVALUATION OF E-O SYSTEMS AND CORRELATION WITH WEATHER OBSERVATION, SIMULATION OF REAL-WORLD SIGNAL/JAMMING ENVIRONMENT FOR EVALUATION OF ELECTRONIC WARFARE SYSTEMS, EVALUATION OF RECON SENSORS IN REALISTIC FLIGHT ENVIRONMENT. OTHER LABS ARE MAINTAINED FOR EVALUATION OF AIRBORNE AND SPACE SENSORS AND COMPONENTS FROM OPTICAL TO RADIO FREQUENCIES.

INSTALLATION: EASTERN SPACE & MISSILE CENTER

PATRICK AFB, FL.

CDR. COL. MARVIN L. JONES

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	0.000	0.000
TOTAL PROCUREMENT	6.119	6.807
TOTAL O&M	249.491	270.200
TOTAL OTHER	22.595	37.100
TOTAL ANNUAL LAB	278.208	314.707
 TOTAL INHOUSE	 98.483	 152.050
TOTAL INHOUSE RDT&E	0.000	0.000
ANNUAL OPERATING COST	25.222	29.000

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	965	2	115	850
CIVILIAN	1206	0	74	1182
TOTAL	2171	2	189	1982

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
17484	129.869	1213.525	4510.214	5853.108	890.367	326.085

...MISSION

SUPPORT OF AIR, GROUND AND SEA LAUNCHED SPACE AND MISSILE SYSTEMS FROM CCAFS AND KSC. OPERATION OF INSTRUMENTED SHIPS IN SUPPORT OF JCS REQUIREMENTS. SUPPORT OF USAF SPACETRACK. SUPPORT OF SPECIAL PROJECTS, DOCUMENTED R&D TESTS AND VARIOUS TENANT ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

NAVY PROGRAMS - POSEIDON, TRIDENT, CHEVALINE AND PENGUIN  
MILITARY SPACE SUPPORT PROGRAMS - TITAN IIIC AND 34D/IUS  
MILITARY MISSION SUPPORT PROGRAMS - SRAM AND PERSHING  
NASA PROGRAMS - DELTA, ATLAS/CENTAUR, AND SPACE SHUTTLE  
DOD SPACE TRANSPORTATION SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ESMC CAPABILITIES INCLUDE: ASSEMBLY, PRELAUNCH CHECKOUT AND LAUNCH PERFORMANCE EVALUATION OF BALLISTIC MISSILES, SPACE LAUNCH VEHICLES AND PAYLOADS. SERVICES INCLUDE: TRACKING, LONG DISTANCE COMMUNICATIONS, AND DATA REDUCTION AND ANALYSIS. EQUIPMENT AND FACILITIES INCLUDE: CCAFS LAUNCH SUPPORT, MAINLAND AND DOWNRANGE INSTRUMENTATION AND COMMUNICATION INSTRUMENTED SHIPS, DATA PROCESSING, PHOTO/ELECTRO-OPTICAL SERVICES, MISSILE IMPACT LOCATION SYSTEMS, EXTENSIVE METEOROLOGICAL SERVICES AND RANGE TIMING SYSTEMS. ESMC OPERATES AND MAINTAINS CCAFS, MAINLAND SITES AND DOWNRANGE STATIONS. SUPPORT FUNCTIONS INCLUDE: CONTRACTOR OPERATION PLANT ENGINEERING, LABS, SHOPS AND OTHER SPECIAL SERVICES.

INSTALLATION: ENGINEERING & SERVICES CNTR / RD

TYNDALL AFB, FL.

CDR. COL. FRANCIS B. CROWLEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	11.755	16.819
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.821	0.810
TOTAL OTHER	1.800	2.052
TOTAL ANNUAL LAB	14.376	19.681
 TOTAL INHOUSE	4.480	4.767
TOTAL INHOUSE RDT&E	1.859	1.905
ANNUAL OPERATING COST	0.150	0.165

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	89	6	45	44
CIVILIAN	18	1	12	6
TOTAL	107	7	57	50

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
8	12.000	14.000	0.000	26.000	1.960	2.156	

...MISSION

AIR FORCE LEAD AGENCY FOR RESEARCH, DEVELOPMENT, TEST, AND EVALUATION IN THE AREAS OF CIVIL ENGINEERING AND ENVIRONMENTAL QUALITY. AF FOCAL POINT FOR ENVIRONMENTAL QUALITY AND LEAD LABORATORY FOR FACILITIES ENERGY.

...CURRENT IMPORTANT PROGRAMS

RAPID RUNWAY REPAIR AND NEW AIRCRAFT OPERATIONAL SURFACES  
ENVIRONMENTAL QUALITY AND ASSESSMENT RESEARCH AND DEVELOPMENT  
SURVIVABILITY/VULNERABILITY OF FACILITIES  
ENERGY CONSERVATION AND ALTERNATE ENERGY SOURCES  
FIRE PROTECTION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

QUALITATIVE AND QUANTITATIVE MEASUREMENTS ON ENGINEERING MATERIALS, PAVEMENTS, SOIL MECHANICS, AIR QUALITY, WASTE TREATMENT PROCESSES, FIRE EXTINGUISHING AGENTS, AND HARDENED AIRCRAFT SHELTERS. EQUIPMENT INCLUDES FLAME AND ABSORPTION SPECTROPHOTOMETERS, WATER/WASTE STANDARD METHODS TEST EQUIPMENT, ELECTRICAL AEROSOL ANALYZING EQUIPMENT, LASER PARTICLE SIZE MEASUREMENT EQUIPMENT, AND MICROPROCESSOR DEVELOPMENT SYSTEMS. REMOTE TERMINAL ACCESS IS AVAILABLE TO CYBER 171 AND 176 SCIENTIFIC COMPUTERS WITH OFF LINE PLOTTING CAPABILITY. A RUNWAY REPAIR /ALTERNATE LAUNCH SURFACE TEST SITE HAS A 200 X600 FOOT TYPICAL RUNWAY SECTION.

INSTALLATION: FLIGHT DYNAMICS LABORATORY

WPAFB, OH.

CDR. COL. ROBERT C. BARLOW

CH. SCI. DR. G. KEITH RICHEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	93.820	99.088
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	15.104	6.028
TOTAL ANNUAL LAB	108.984	105.058
TOTAL INHOUSE	28.952	31.740
TOTAL INHOUSE RDT&E	23.668	25.717
ANNUAL OPERATING COST	5.808	6.300

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	188	2	121	67
CIVILIAN	640	81	434	206
TOTAL	828	83	555	273

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
92	530.356	5.100	147.128	682.584	27.558	56.504

...MISSION

PLAN AND EXECUTE RESEARCH, EXPLORATORY AND ADV DEV PROGRAMS FOR AERO-  
SPACE FLT VEHICLE STRUCTURES, AERODYNAMICS, FLT CONTROL, DYNAMICS AND  
EQUIPMENT. LEAD AFSC LAB FOR EXPERIMENTAL FLT VEHICLES. FOCAL POINT FOR  
NON-NUCLEAR SURVIVABILITY PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

ADVANCED COMPOSITE STRUCTURES  
ADVANCED FIGHTER TECHNOLOGY INTEGRATOR  
AIRCRAFT GROUND MOBILITY SYSTEM  
DIGITAL FLIGHT CONTROL SYSTEM  
FORWARD SWEPT WING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FATIGUE TESTING OF F-4C/D IN THE STRUCTURES TEST FACILITY DEMONSTRATED  
STRUCTURAL MODIFICATIONS TO DOUBLE LIFE. THE LANDING GEAR TEST FACILITY  
WHICH DYNAMICALLY SIMULATES LANDING GEAR PERFORMANCE, ENABLED CERTIFI-  
CATION OF THE SHUTTLE LANDING GEAR HARDWARE. EVALUATION OF AIRCREW/AVIONIC  
COMPLEMENT FOR KC-135 TANKER WAS PERFORMED IN THE ENGINEERING FLT SIM-  
ULATION FAC. PERFORMANCE/RELIABILITY OF AERONAUTICAL EQUIPMENT UNDER  
REALISTIC ENVIRONMENTAL CONDITIONS WERE ASSESSED IN THE COMBINED ENVI-  
RONMENTS RELIABILITY TESTING FACILITY. BALLISTIC RANGE ASSESSED VUNER-  
ABILITY OF A/C DRY BAYS TO MISSILE FRAGMENT IMPACT BY SIMULATING THREAT,  
FUEL, STRUCTURAL AND AERODYNAMIC ENVIRONMENTS. FLOW VISUALIZATION TESTS  
WERE CONDUCTED IN A PILOT WATER TUNNEL ON FORWARD SWEPT WING CONCEPTS  
AND ESTABLISHED CRITERIA FOR A LARGER WATER TUNNEL FACILITY.

## INSTALLATION: FLIGHT TEST CENTER

EDWARDS AFB, CA.

CDR. MG. P. J. CONLEY JR

TRCH. DIR. MR. F. N. STOLIKER

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	122.108	144.485
TOTAL PROCUREMENT	8.081	2.800
TOTAL O&M	14.758	18.095
TOTAL OTHER	72.966	78.179
TOTAL ANNUAL LAB	212.838	248.559
 TOTAL INHOUSE	151.818	175.020
TOTAL INHOUSE RDT&E	84.876	100.426
ANNUAL OPERATING COST	22.680	22.662

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		NON- PROF
		PHDS	PROF	
MILITARY	2988	8	141	2847
CIVILIAN	1645	4	279	1866
TOTAL	4638	7	420	4213

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER		TOTAL	REAL PROP
218767	102.125	268.504	7664.465	8030.094	291.831	189.151

## ...MISSION

TESTS MANNED/UNMANNED AEROSPACE VEH, INCL ALL-WEATHER. FLT EVAL AEROSPACE RSCH VEH AND DEV TEST AERODYNAMIC DECELERATORS. USAF TEST PILOT SCHOOL. SUPPORTS USAF, DOD, GOV, FOREIGN AND CONTRACTOR TEST/EVAL. UTAH TEST AND TRAINING RANGE AND EDWARDS FLIGHT TEST RANGE.

## ...CURRENT IMPORTANT PROGRAMS

INTEGRATED WEAPONS SYSTEMS TESTS  
 F-16 DT AND E  
 A-10 DT AND E  
 F-15 DT AND E  
 INTEGRATED FLIGHT AND FIRE CONTROL SYSTEMS

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

TECHNICAL CAPABILITIES. FACILITIES AND EQUIP ARE AVAILABLE FOR COMPLETE RANGE OF SERVICES TO CONDUCT DT AND E FLT TESTS OF AERONAUTICAL SYS OVER LONG DISTANCES, TO CONDUCT FLT EVAL AND RECOVER RSCII VEH, AND TO TRAIN TEST PILOTS. FLIGHT TEST MISSION CONTROL COMPLEX, ENRG FACILITIES, REAL-TIME INSTRUMENTED RANGES, DATA COLLECTION, REDUCTION AND ANALYSIS FAC, PHOTO/TV, ACFT/ENGINE MAINT, TEST EQUIP, ELECTRONIC SHOPS, AND DRY LAKES FOR RECOVERY AND EMERGENCY LANDINGS PROVIDE SUPPORT FOR ALL PROGRAMS. OTHER FACILITIES ARE PRECISION IMPACT, GUNNERY/BOMBING, INFRARED/PHOTO RESOLUTION, RADAR FIDELITY, TACTICAL AND OPTICAL RANGES, ENGR SIMULATOR, MUNITIONS STORAGE AND CHECKOUT, AND CONTRACTOR-ASSIGNED HANGARS, SHOPS, OFFICE SPACE, ETC. INTEGRATED REAL-TIME MISSION CONTROL CENTER.

INSTALLATION: FRANK J SEILER RESEARCH LABORATORY

USAF ACADEMY, CO.

CDR. COL. W. D. SIURU

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	0.960	0.959
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	0.545	0.629
TOTAL ANNUAL LAB	1.505	1.583
 TOTAL INHOUSE	 1.505	 1.588
TOTAL INHOUSE RDT&E	0.960	0.959
ANNUAL OPERATING COST	0.051	0.070

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	28	12	14	9
CIVILIAN	9	1	4	5
TOTAL	82	18	18	14

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
0	19.000	8.100	0.000	22.100	0.100	2.100

...MISSION

CONDUCT RESEARCH IN AEROSPACE MECHANICS AND CHEMISTRY.  
ENCOURAGE & SUPPORT ACADEMY FACULTY & CADET RESEARCH BY DIRECT PARTICI-  
PATION. MONITOR FACULTY CONSULTANT PROG, SUMMER RSCH PROG. FOCAL POINT FOR  
USAF ACADEMY RESEARCH PROPOSED TO DL RESEARCH & TECHNOLOGY LABS (AFSC).

...CURRENT IMPORTANT PROGRAMS

BATTERY RESEARCH & ELECTROCHEMISTRY OF MOLTEN SALTS, ENERGETIC MATERIALS  
RESEARCH, CHEMICAL MOLECULAR DYNAMICS  
OPTICAL ROTATION SENSORS, OPTICS RESEARCH, PERIODIC CONTROL, NUCLEAR  
GYROS, IMAGE PROCESSING.  
UNSTEADY AERODYNAMICS, INTEGRATED AIRBREATHING PROPULSION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MOLTEN SALT MELT STRUCTURE, CONDUCTIVITY & ELECTRODE REACTIONS. EXPLOSIVE &  
PROPELLANT SYNTH, DECOMPOSITION MECHANISMS & DETONATION PHENOMENA. GENERAT-  
ION, MSMT, SPECTROSCOPY & MO CALC. OF EXCITED STATE SPECIES. IR, UV, NMR, EPR,  
X-RAY & MASS SPECTS, GAS & LIQ CHROMATOGRAPHS, ELECTRON MICROSCOPE, SPECIAL  
SPECTROMETERS & CONDUCTIVITY EQUIP., ASSOC FACILITIES FOR WET CHEMISTRY.  
ADVANCED ANALYSIS & EVALUATION TECHNIQUES FOR INERTIAL GUIDANCE SENSORS  
USING 2-AXIS TEST TABLE (GYRO), AUTOMATIC AZIMUTH ALIGNMENT EQUIPMENT &  
ELECTRONIC CONTROL EQUIP FOR 50 SERIES INERTIAL DEVICES LOCATED IN A  
CLASS 1000 CLEAN LAB ON 80 TON AIR SUPPORTED STABLE PLATFORM. VAX 11/780  
MINI COMPUTER & SOFTWARE TO AUTOMATE GYRO RESEARCH.

AERODYNAMIC RESEARCH IN USAFA SUBSONIC & TRISONIC WIND TUNNELS,  
HOLOGRAPHIC & OTHER OPTICAL FLOW VISUALIZATION INSTRUMENTATION.

## INSTALLATION: GEOPHYSICS LABORATORY

HANSCOM AFB, MA.

CDR. COL. JOHN FRIEL

CHI. SCI. DR. JOHN N. HOWARD

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	68.287	69.161
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	8.764	8.588
TOTAL ANNUAL LAB	66.991	72.747
 TOTAL INHOUSE	 27.497	 28.848
TOTAL INHOUSE RDT&E	26.250	25.978
ANNUAL OPERATING COST	6.750	7.074

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	120	6	41	79
CIVILIAN	491	91	295	196
TOTAL	611	97	336	275

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP	
885	883.689	14.566	25.888	429.188	9.863	62.084	

## ...MISSION

CONDUCTS AND SUPPORTS AF RELEVANT RESEARCH AND EXPLORATORY DEVELOPMENT IN ENVIRONMENTAL AND PHYSICAL SCIENCES WITH MAJOR EMPHASIS ON GEOPHYSICS. ALSO CONDUCTS AND SUPPORTS SPECIFICALLY ASSIGNED ADVANCED DEVELOPMENT EFFORTS.

## ...CURRENT IMPORTANT PROGRAMS

## SPACE ENVIRONMENT

WEATHER FORECAST AND OBSERVING AUTOMATION  
IONOSPHERIC SPECIFICATION FOR C8I SYSTEMS  
OPTICAL, INFRARED AND UV BACKGROUNDS FOR SURVEILLANCE SYSTEMS  
GEODETIC AND EARTH MOTION EFFECTS ON MISSILE CEP

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCTS RESEARCH AND TECHNICAL DEVELOPMENT IN TERRESTRIAL SCIENCES, METEOROLOGY, AERONOMY, AND OPTICAL, SPACE AND SOLAR PHYSICS RELATING TO AIR FORCE NEEDS. EQUIPMENT AND FACILITIES INCLUDE IN-HOUSE LABORATORIES; SPACE SIMULATION CHAMBERS; ROCKET AND BALLOON LAUNCH FACILITIES; TWO KC-135 AIRCRAFT FOR OPTICAL, UPPER ATMOSPHERIC AND IONOSPHERIC STUDIES; AND TWO CDC 6600 COMPUTER SYSTEMS

## INSTALLATION: HUMAN RESOURCES LABORATORY

BROOKS AFB, TX.

CDR. COL. RONALD W. TERRY

VICE CDR. COL. KENNETH E. STOUT

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	25.729	28.198
TOTAL PROCUREMENT	0.827	0.014
TOTAL O&M	2.106	1.525
TOTAL OTHER	2.742	8.089
TOTAL ANNUAL LAB	80.904	82.886
 TOTAL INHOUSE	18.111	18.914
TOTAL INHOUSE RDT&E	10.532	11.018
ANNUAL OPERATING COST	2.125	2.801

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL		TOTAL PROF	NON- PROF
		PHDS	PROF		
MILITARY	124	6	71	71	53
CIVILIAN	286	41	189	189	97
TOTAL	380	47	210	210	150

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
5	88.619	55.009	58.570	202.098	6.817	73.660

## ...MISSION

PLAN AND EXECUTE RESEARCH, EXPLORATORY DEVELOPMENT, AND ADVANCED DEVELOPMENT PROGRAMS IN TRAINING AND PERSONNEL SYSTEMS TECHNOLOGY.

## ...CURRENT IMPORTANT PROGRAMS

MANPOWER AND PERSONNEL PROGRAMS IN SELECTION, CLASSIFICATION AND RETENTION; EDUCATION AND TRAINING PROGRAMS IN TECHNICAL TRAINING, FLYING TRAINING AND CREW AND TEAM TRAINING; SIMULATION AND TRAINING DEVICES PROGRAMS; DEVELOPING FLIGHT AND MAINTENANCE TRAINING SIMULATORS; LOGISTICS PROGRAMS IN COMBAT MAINTENANCE.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE ADVANCED SIMULATOR FOR PILOT TRAINING CONSISTING OF TWO COCKPITS ON A SIX DEGREES OF FREEDOM MOTION BASE WITH WIDE-ANGLE INFINITY VISUAL DISPLAYS AND A COMPUTER IMAGE GENERATION SYSTEM. THE ADVANCED INSTRUCTIONAL SYSTEM COMPUTER-BASED TRAINING SYSTEM OFFERING INDIVIDUALIZED, ADAPTIVE TRAINING TO MAXIMIZE INDIVIDUAL LEARNING PERFORMANCE. THE UNIVAC 1100/81 COMPUTER SYSTEM USED FOR R&D IN ALL FACETS OF PERSONNEL SELECTION, TRAINING, MANAGEMENT AND RETENTION.

## INSTALLATION: MATERIALS LABORATORY

WPAFB, OH.

DIR. MR. GEORGE P. PETERSON

CH. SCI. DR. NORMAN M. TALLAN

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	58.883	58.491
TOTAL PROCUREMENT	60.100	68.252
TOTAL O&M	2.752	8.100
TOTAL OTHER	1.798	2.049
TOTAL ANNUAL LAB	128.533	181.892
 TOTAL INHOUSE	 14.882	 15.815
TOTAL INHOUSE RDT&E	12.584	18.266
ANNUAL OPERATING COST	8.004	8.100

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	52	4	40	12
CIVILIAN	812	65	245	67
TOTAL	864	69	285	79

## SPACE AND PROPERTY

ACRIS	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
15	188.750	119.141	84.128	382.014	28.840	19.226

## ...MISSION

PLAN/EXECUTE EXPLORATORY AND ADVANCED DEVELOPMENT, AND ASSIGNED BASIC RESEARCH PROGRAMS FOR MATERIALS. PROVIDE TECHNICAL AND MANAGEMENT ASSISTANCE FOR STUDIES, ANALYSIS, DEVELOPMENT PLANNING, ACQUISITION, TEST, EVALUATION, MODIFICATION AND OPERATION OF AEROSPACE SYSTEMS.

## ...CURRENT IMPORTANT PROGRAMS

ADVANCED DEVELOPMENT OF LASER HARDENED MATERIALS  
 MAN TECH COST REDUCTION PROGRAM FOR METALS, NON-METALS AND EM MATERIALS  
 THERMAL PROTECTION MATERIALS FOR REENTRY VEHICLES  
 PROPULSION SYSTEMS MATERIALS  
 SYSTEMS SUPPORT

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

DIRECTED MANUFACTURING PROGRAMS. MATERIALS RESEARCH AND DEVELOPMENT FACILITIES AND CAPABILITIES FOR AEROSPACE STRUCTURES, THERMAL PROTECTION SYSTEMS FOR BALLISTIC REENTRY VEHICLES AND ENGINES, FLUIDS, LUBRICANTS, FLUID CONTAINMENT, PROPULSION COATINGS, FIBERS, ELECTROMAGNETIC WINDOWS, SENSORS, DISPLAYS, LASER WINDOWS AND OPTICAL DEVICES, ELECTRICAL COMPONENTS, NON-DESTRUCTIVE TESTING, POLYMERS, ADHESIVES, NON-METALLIC MATRIX COMPONENTS, ELASTOMERS, METALS, ALLOYS, METAL COMPOSITES, METAL PROCESSING, INTERMETALLICS, CERAMICS, STATIC AND DYNAMIC BEHAVIOR, JOINING, GRAPHITE, ELECTRONIC/PHYSICAL/CHEMICAL ANALYSIS, OTHER MAJOR MATERIALS FUNCTIONS WHICH INCLUDE: MANUFACTURING TECHNOLOGY, SYSTEMS APPLICATIONS, SYSTEM SUPPORT, AND THERMAL PROTECTION MATERIALS.

INSTALLATION: OFFICE OF SCIENTIFIC RESEARCH

WASHINGTON, D.C.

CDR. COL. JAMES E. BAKER

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	128.588	185.220
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	1.171	1.370
TOTAL ANNUAL LAB	124.754	186.590
 TOTAL INHOUSE	26.881	29.258
TOTAL INHOUSE RDT&E	24.710	27.888
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL	AUTHORIZED STRENGTH	PERSONNEL DATA (END OF FY 1981)		NON- PROF
		TOTAL PHDS	TOTAL PROF	
MILITARY	46	14	82	14
CIVILIAN	96	25	88	58
TOTAL	142	39	70	72

ACRES	SPACE AND PROPERTY				COST (MILLION \$)	
	SPACE (THOUSANDS OF SQUARE FEET)				REAL PROP	EQUIP
	LAB	ADMIN	OTHER	TOTAL		
0	0.000	36.688	5.128	41.816	0.000	0.000

...MISSION

MANAGES THE AF RESEARCH PROGRAM, PREVENTS TECHNOLOGICAL SURPRISE, ASSISTS IN SOLVING TECHNOLOGICAL PROBLEMS, PROVIDES RESEARCH OPTIONS, ENHANCES THE CONTINUED SUPERIORITY OF THE AF OPERATIONAL CAPABILITY ASSISTS IN TRANSITION OF PRODUCTS OF THAT RESEARCH TO DEVELOPMENT ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

SPACE POWER AND PROPULSION

SPACECRAFT STRUCTURES AND MATERIALS

SPACECRAFT IMAGE PROCESSING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MANAGE THE AIR FORCE RESEARCH PROGRAM AND SPONSOR EXTRAMURAL RESEARCH.

## INSTALLATION: ROCKET PROPULSION LABORATORY

EDWARDS AFB, CA.

CDR. COL. ALLAN MACLAREN

DIR. MR. DON HART

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	40.222	44.746
TOTAL PROCUREMENT	0.079	0.010
TOTAL O&M	0.087	0.054
TOTAL OTHER	3.181	3.509
TOTAL ANNUAL LAB	48.519	48.319
 TOTAL INHOUSE	17.428	18.940
TOTAL INHOUSE RDT&E	14.161	15.897
ANNUAL OPERATING COST	0.850	0.950

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	174	2	66	108
CIVILIAN	250	11	103	147
TOTAL	424	13	169	255

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
68845	419.046	86.848	4.780	510.674	126.000	22.477

## ...MISSION

CONDUCT THE AIR FORCE'S ROCKET PROPULSION RESEARCH, EXPLORATORY, AND ADV DEVEL PROGRAMS TO PROVIDE ADV TECH FOR FUTURE ICBMS, STRATEGIC AND TACTICAL AIR LAUNCHED MISSILES, SPACE VEHICLES, AND SATELLITES. PROVIDES ROCKET PROPULSION TECHNOLOGICAL SUPPORT OT DOD AND NON-DOD AGENCIES.

## ...CURRENT IMPORTANT PROGRAMS

SUPPORT TO THE MX FULL SCALE ENGINEERING DEVELOPMENT. PROVIDE PROPULSION OPTIONS FOR ADVANCED BALLISTIC MISSILES. PROVIDING HIGH PERFORMANCE AND PROPULSION FLEXIBILITY OPTIONS FOR TACTICAL MISSILES. PROVIDE PROPULSION OPTIONS FOR SPACE SYSTEMS DEPLOYMENT. DEMONSTRATE HIGHER PERFORMANCE SATELLITE THRUSTERS.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

LABORATORIES FOR SYNTHESIS, ANALYSIS AND FORMULATION OF NEW PROPELLANTS. FACILITIES FOR MIXING, CASTING, CURING AND TESTING SOLID ROCKET MOTORS. SCLID MOTOR EXPERIMENTAL COMPLEX FOR INVESTIGATION OF COMBUSTION, AGING, STRUCTURAL INTEGRITY, BALLISTIC PERFORMANCE AND HIGH TEMP COMPONENTS. LAB FOR EXPERIMENTATION OF SMALL ATTITUDE CONTROL AND SATELLITE PROPULSION SYSTEMS AND COMPONENTS UNDER SIMULATED SPACE ENVIRONMENTS. ALTITUDE EXPERIMENTATION OF LIQUID AND SOLID ROCKETS UP TO 50,000 POUNDS THRUST. AMBIENT EXPERIMENTATION OF LIQUID OR SOLID ROCKETS UP TO 500,000 POUNDS THRUST. IN-HOUSE ANALYTICAL CAPABILITY FOR DESIGN, ANALYSIS, AND DATA REDUCTION. SHOPS FOR FABRICATING EXPERIMENTAL HARDWARE AND SYSTEMS.

INSTALLATION: ROME AIR DEVELOPMENT CENTER

GRIFFISS AFB, N.Y.

CDR. COL. PHILIPPE BOUCHARD

CH. SCI. DR. FRED I. DIAMOND

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	217.149	212.289
TOTAL PROCUREMENT	17.061	12.607
TOTAL O&M	86.614	86.285
TOTAL OTHER	4.217	4.616
TOTAL ANNUAL LAB	276.041	265.747
 TOTAL INHOUSE	 28.524	 80.169
TOTAL INHOUSE RDT&E	24.156	25.891
ANNUAL OPERATING COST	18.197	14.076

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	222	9	118	104
CIVILIAN	1088	54	561	527
TOTAL	1810	68	679	631

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
1517	766.168	54.080	182.271	1002.519	27.492	53.499

...MISSION

CONDUCTS RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT, TEST AND SELECTED ENGINEERING DEVELOPMENT AND ACQUISITION SUPPORT PROGRAMS IN SUPPORT OF COMMAND, CONTROL AND COMMUNICATIONS AND INTELLIGENCE ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

ADVANCED TACTICAL RADAR

SPACE BASED RADAR

COMMAND, CONTROL AND COMMUNICATIONS DECISION AIDS

SATELLITE COMMUNICATIONS

ADVANCED AIRBORNE SURVEILLANCE RADAR

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR AREAS OF TECHNOLOGY ARE ANTENNAS, SIGNAL PROCESSING, SOLID STATE COMPONENTS, THERMIQUICS, OPTO-ELECTRONICS, RADIATION HARDENING, SYSTEM AND COMPONENT RELIABILITY, SOFTWARE, ARTIFICIAL INTELLIGENCE-WITH EMPHASIS ON DECISION AIDS, AND RECONNAISSANCE AND INTELLIGENCE DATA HANDLING. MAJOR IN-HOUSE FACILITIES ARE: RECONNAISSANCE EXPLOITATION FACILITY, HIGH POWER FACILITY, DIGITAL COMMUNICATIONS EXPERIMENTAL FACILITY, R AND D COMPUTER FACILITY FEATURING TWO HONEYWELL 6180 COMPUTERS WITH MULTICS, RELIABILITY ANALYSIS CENTER, RADIATION EFFECTS FACILITY, EXPERIMENTAL PHOTOGAMMETRIC FACILITY, ECCM AND SIGNAL PROCESSING LABORATORY, SOLID STATE DEVICE FAILURE ANALYSIS FACILITY, EXPERIMENTAL DEVICE FABRICATION FACILITY, ELECTRO-MAGNETIC VULNERABILITY FACILITY FOR WEAPONS TESTING, SURVEILLANCE LABORATORY, AND MATERIALS SYNTHESIS AND DEVELOPMENT FACILITY.

INSTALLATION: SCHOOL OF AEROSPACE MEDICINE

BROOKS AFB, TX.

CDR. COL. ROY L. DEHART VICE CDR. COL. JAMES A. BOYDSTUN

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	20.547	28.258
TOTAL PROCUREMENT	0.000	0.000
TOTAL OEM	0.000	0.000
TOTAL OTHER	7.000	7.980
TOTAL ANNUAL LAB	27.547	36.238
 TOTAL INHOUSE	20.854	22.050
TOTAL INHOUSE RDT&E	18.854	14.070
ANNUAL OPERATING COST	2.800	8.100

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	888	48	121	267
CIVILIAN	269	84	95	174
TOTAL	657	82	216	441

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)			COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
74	482.994	51.447	196.108	680.544	17.862	20.216

...MISSION

CONDUCT EXPLORATORY RESEARCH AND DEVELOPMENT PROGRAMS IN AEROSPACE BIOTECHNOLOGY. INCLUDES LIFE SUPPORT, AEROSPACE MEDICINE, BIOMEDICAL PROGRAMS AND RADIobiology. PROVIDE MEDICAL EVALUATION AND CONSULTATION FOR AIRCREWS TO ASSURE RETENTION OF FLYING STATUS.

...CURRENT IMPORTANT PROGRAMS

CREW READINESS/CREW PROTECTION TECH FOR ADV SYS/CHEMICAL ENVIRONMENTS  
MEDICAL AND BIOMEDICAL ASPECTS OF AEROSPACE OPERATIONS.  
RADIobiology IN AEROSPACE OPERATIONS.  
MODELING BIOLOGICAL SYSTEMS/MAN-ATMOSPHERE ENVIRONMENT INTERACTION.  
HUMAN FACTORS IN A/C ACCIDENT PREVENTION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RESEARCH IN AEROSPACE MEDICAL PROBLEMS, LIFE SUPPORT, ENVIRONMENTAL STRESS, RADIobiology, LASER, BIOMETRICS, BIOMED ENGINEERING, RDTE ON MEDICAL EQUIPMENT AND SYSTEMS. WHOLE BODY COUNTER, HUMAN CENTRIFUGE, TESTING CELLS, RESEARCH CHAMBERS, TELETherapy COBALT 60 RADIATION SOURCE, RADIOFREQUENCY RADIATION FACILITY, ELECTRON MICROSCOPE SYSTEM, REMOTE INTERACTIVE GRAPHIC TERMINAL SYSTEM, THERMAL CHAMBER, CARDIAC CATH LAB, AEROSP MED SCIENCE LAB, LASER HAZARD FACILITIES, AEROMEDICAL LIBRARY, AEROSP MED EVALUATION AND CONSULTATIVE SERVICES, OPTICAL RESEARCH AUDIOLOGY, VESTIBULAR STUDIES, PSYCHOBIOLOGY, RADIOISOTOPE, AEROMED STANDARDS, MODELING, BIOMED RESEARCH, MEDICAL REPOSITORIES, RADIATION SCIENCES RESEARCH, BIODYNAMICS RESEARCH, DEVELOP ENGINEERING.

INSTALLATION: WEAPONS LABORATORY

KIRTLAND AFB, N.M.

CDR. COL. B. L. FRANCIS

VCDR. COL. T. M. JOHNSON

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981	1982
	(ACTUAL)	(ACT + EST)
TOTAL RDT&E	155.000	169.656
TOTAL PROCUREMENT	0.000	0.000
TOTAL Q&M	0.520	1.289
TOTAL OTHER	15.682	17.770
TOTAL ANNUAL LAB	171.152	188.665
 TOTAL INHOUSE	73.787	81.872
TOTAL INHOUSE RDT&E	57.585	62.868
ANNUAL OPERATING COST	14.658	15.916

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	650	88	843	807
CIVILIAN	525	57	271	254
TOTAL	1175	95	614	561

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
702	555.629	161.356	182.261	849.246	76.618	67.690

...MISSION

RESPONSIBLE FOR EXPLORATORY, ADVANCED, AND ENGINEERING DEVELOPMENT IN NUCLEAR WEAPONS EFFECTS, COMPONENTS, NUCLEAR SURVIVABILITY/VULNERABILITY, HIGH ENERGY LASER SYSTEMS, ADVANCED WEAPON CONCEPTS AND TECHNOLOGY, AND NUCLEAR SAFETY.

...CURRENT IMPORTANT PROGRAMS

ADVANCED RADIATION TECHNOLOGY

ADVANCED WEAPON TECHNOLOGY

NUCLEAR SURVIVABILITY/VULNERABILITY ANALYSIS AND TESTING

NUCLEAR SAFETY ANALYSIS AND DESIGN CRITERIA

NUCLEAR WEAPONS EFFECTS ANALYSIS AND TESTING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NUCLEAR WEAPONS EFFECTS SIMULATION, SAFETY, COMPONENT ASSESSMENT AND ANALYSIS OF WEAPONS SYSTEMS NUCLEAR HARDNESS ARE CONDUCTED IN ENGINEERING TEST LABORATORIES AND PHYSICS LABORATORIES. SIMULATION TESTS ON MISSILES, AIRCRAFT, AND COMPONENTS USE ELECTROMAGNETIC PULSE SIMULATORS, GAS GUNS, AND X-RAY DEVICES. CIVIL ENGINEERING PROGRAMS USE SHOCK TUBES AND HIGH EXPLOSIVES FOR SIMULATION OF NUCLEAR BLAST AND SHOCK. LASER SYSTEMS DEVELOPMENT USES LASER/OPTICS LABORATORIES AND TEST RANGES WITH LARGE, HIGH POWER DEVICES. A TECHNICAL LIBRARY, METALLURGY AND METROLOGY LABORATORIES, 1 CRAY AND 1 CDC-6600 COMPUTERS WITH REMOTE ACCESS TERMINALS AND MULTI-CHANNEL SENSING/RECORDING AND DATA REDUCTION SUPPORT ALL REQUIRING RDT/E PROGRAMS.

INSTALLATION: WESTERN SPACE AND MISSILE CENTER

VANDENBERG AFB, CA.

CDR. COL. WILLIAM J. MURPHY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	0.600	2.600
TOTAL PROCUREMENT	6.978	5.866
TOTAL O&M	91.801	108.768
TOTAL OTHER	9.498	9.780
TOTAL ANNUAL LAB	108.877	121.994
 TOTAL INHOUSE	 107.477	 120.994
TOTAL INHOUSE RDT&E	0.000	1.800
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	295	1	808	13
CIVILIAN	362	2	368	1
TOTAL	657	3	671	14

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
F6860	914.964	568.108	607.827	2090.894	180.000	800.000

...MISSION

OPERATE THE WESTERN TEST RANGE TO SUPPORT FIELD TEST AND LAUNCH OPERATIONS FOR A VARIETY OF GOVERNMENT RANGE USERS.

WSMC CAPABILITIES INCLUDE TEST LAUNCH AND RANGE SUPPORT. TEST LAUNCH INCLUDES: ASSEMBLY AND PRELAUNCH TESTING OF LAUNCH VEHICLE SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

ADVANCED BALLISTIC REENTRY SYSTEMS PROGRAMS.

MINUTEMAN II OPERATIONAL TESTING PROGRAM.

MINUTEMAN III OPERATIONAL TESTING PROGRAM

SPACE LAUNCH PROGRAMS USING TITAN, ATLAS, DELTA, AND SCOUT BOOSTERS.

RANGE SUPPORT TO GUIDED MISSILE AND AERONAUTICAL TEST PROGRAMS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ATLAS, TITAN AND MM BOOSTERS; PAYLOAD AND VEHICLE INTEGRATION/CHECKOUT; AND LAUNCH CONTROL/SAFETY. WESTERN TEST RANGE SUPPORT INCLUDES NEAR AND FAR TERM RANGE INSTRUMENTATION PLANNING, AND DATA GATHERING ON BALLISTIC/SPACE/GUIDED MISSILES; AIRCRAFT AND OTHER TESTS AT UPRANGE AND CATIONS, AND COMMAND CONTROL SYSTEMS ARE AVAILABLE. LAUNCH AZIMUTHS VARY FROM 140 TO 818 DEGREES. AERONAUTICAL TESTS ARE CONDUCTED IN AN INSTRUMENTED OFFSHORE OPERATING AREA. LAUNCH FACILITIES AND RANGE INSTRUMENTATION CAN BE RECONFIGURED TO MEET PROGRAM REQUIREMENTS.

INSTALLATION: 4950 TEST WING

WPAFB, OH.

CDR. COL. R. W. YATES

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	66.426	84.094
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	2.005	2.211
TOTAL OTHER	16.122	17.251
TOTAL ANNUAL LAB	84.558	103.558
 TOTAL INHOUSE	 80.899	 99.104
TOTAL INHOUSE RDT&E	62.772	79.642
ANNUAL OPERATING COST	0.000	0.000

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	865	1	27	888
CIVILIAN	1048	0	100	948
TOTAL	1918	1	127	1786

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
205	0.000	57.671	891.608	949.279	14.260	398.456

...MISSION

DOD MAJ TEST FAC. PERFORMS T&E ON MIL SYS, SUBSYS, AND COMP. OPER & MAIN ASGN TEST SUP ACFT AND ANCIL EQUIP. MANAGES A CENTRAL FAC FOR MAJ MOD OF AFSC ACFT. OPER SHOP FAC IN SUP OF CMD ACFT CLASS II MODS AND AFVAL R&D PROGMS. PROVIDES FLT TST ENGRG, TECH DATA ACQ, AND TECH PHOTO SVCS.

...CURRENT IMPORTANT PROGRAMS

TRIDENT

SUPPORT TO AIR LAUNCH CRUISE MISSILE (ALCM)

AIRBORNE LASER LABORATORY

CROSSEYE ECM

SATELLITE COMMUNICATION (SATCOM)

...FUNCTIONS/EQUIPMENT/CAPABILITIES

41 TEST SUPPORT AIRCRAFT (7 ARIA EC-185) PROVIDE GLOBAL SUPPORT

ALL AFSC MAJOR CLASS II AIRCRAFT MODIFICATIONS

MISSILE LAUNCH/REENTRY TRACKING AND DATA RELAY

1400 SQUARE MILE RESTRICTED TEST AREA IN OHIO

FLIGHT TEST ENGINEERING (AERO-MECH, AVIONICS, ANALYSIS, INSTRUMENTATION)

TEST DATA ACQUISITION/PROCESSING/ANALYSIS

8 OPERATIONAL SQS (FLIGHT CREWS) AND 8 MAINTENANCE SQS

SPECIALIZED FABRICATION AND MODELING EQUIPMENT

COMPUTER AIDED DESIGN/MANUFACTURING (CAD/CAM) CAPABILITY

TECHNICAL PHOTOGRAPHIC INSTRUMENTATION & PROCESSING

LARGEST PMEL IN AF

ASD LABORATORY MATERIAL CONTROL ACTIVITY.

INSTALLATION: 6585TH TEST GROUP

HOLLOMAN AFB, N.M.

CDR. COL. ROBERT E. HANEY

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	21.114	24.898
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	5.904	6.200
TOTAL OTHER	7.803	6.779
TOTAL ANNUAL LAB	84.821	87.872
 TOTAL INHOUSE	 16.580	 19.983
TOTAL INHOUSE RDT&E	11.677	14.859
ANNUAL OPERATING COST	0.108	0.180

PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	825	1	105	220
CIVILIAN	281	8	186	95
TOTAL	606	4	291	315

SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)		
	LAB	ADMIN	OTHER	TOTAL	REAL	PROP	EQUIP
6602	886.000	12.000	165.000	563.000	103.657	40.748	

...MISSION

DOD FOCAL POINT FOR FLIGHT, LAB & SLED T&E OF INERTIAL GUIDANCE SYST & COMPONENTS. HIGH SPEED TRACK FOR AERODYNAMIC, EJECTION, IMPACT, RAINFLD GUIDANCE & BLAST INTERACTION. RADAR CROSS SECTION & ANTENNA PATTERNS OF A/C, SPACECRAFT RVS. A/C SUPPORT FOR IN-HOUSE AND TRANSIENT REQUIREMENTS

...CURRENT IMPORTANT PROGRAMS

MX MISSILE GUIDANCE SYSTEM AND COMPONENTS TESTING  
A/C NAVIGATION SYSTEM VERIFICATION TESTING, PROJECT 68SG  
B-52 INTEGRATED WEAPONS SYSTEM TESTING  
ADVANCED GUIDANCE TECHNOLOGY TESTING IN SUPPORT OF ABRES  
HBU-X LAB BELT TESTING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

1-260IN/2-100IN PRECISION CENTRIFUGES, PRECISION GRND/ABN TEST FACILITY  
PRECISION REFERENCE/DATA COLLECTION  
ENVIRONMENTAL CHAMBERS/INERTIAL NAV TEST VAN  
508798 FT TEST TRACK, 85,588 FT, 2 RAIL/15,200 FT, 3 RAIL  
5 BLOCKHOUSES, 2 INTRMN STATIONS  
9000 FT TRACKSIDE, 2000 FT BALL RAINFLD, ROCKET SLED/PROPULSION SYST  
INV RADAR SCATTER FAC, 80 MHZ TO 95 GHZ  
MEASURE MONOSTATIC/BISTATIC AMP, PHASE, DOPPLER, CLINT  
JET ENGINE MODULATION IR SIGNATURE

INSTALLATION: ARMED FORCES RADIobiology RSCH. INSTITUTE

BETHESDA, MD.

CDR. CAPT. PAUL E. TYLER

## PROGRAM DATA BY FISCAL YEAR (MILLION \$)

PROGRAM	1981 (ACTUAL)	1982 (ACT + EST)
TOTAL RDT&E	8.758	10.575
TOTAL PROCUREMENT	0.000	0.000
TOTAL O&M	0.000	0.000
TOTAL OTHER	2.544	8.080
TOTAL ANNUAL LAB	11.297	18.635
 TOTAL INHOUSE	 11.297	 18.655
TOTAL INHOUSE RDT&E	8.758	10.575
ANNUAL OPERATING COST	2.270	2.689

## PERSONNEL DATA (END OF FY 1981)

PERSONNEL	AUTHORIZED STRENGTH	TOTAL PHDS	TOTAL PROF	NON- PROF
MILITARY	91	22	44	47
CIVILIAN	181	16	49	82
TOTAL	222	88	98	129

## SPACE AND PROPERTY

ACRES	SPACE (THOUSANDS OF SQUARE FEET)				COST (MILLION \$)	
	LAB	ADMIN	OTHER	TOTAL	REAL PROP	EQUIP
10	26.528	16.047	56.540	99.110	18.895	13.765

## ...MISSION

THE MISSION OF AFRRI SHALL BE TO CONDUCT RESEARCH IN THE FIELD OF RADIobiology AND RELATED MATTERS ESSENTIAL TO THE OPERATIONAL AND MEDICAL SUPPORT OF THE DEPARTMENT OF DEFENSE AND THE MILITARY SERVICES

## ...CURRENT IMPORTANT PROGRAMS

DEFINE PHYSIOLOGICAL/PATHOLOGICAL RESPONSE IN HUMANS TO RADIATION.  
ASSESS EFFECTS OF COMBINED INJURIES, MILITARY FORCES/NONCOMBATANTS,  
DATA FOR PREDICTION OF COMBAT INEFFECTIVENESS AND CASUALTY PRODUCTION.  
TREATMENT METHODS FOR CASUALTIES FROM RADIATION/COMBINED INJURY.  
INSTRUCTION TO ARMED SERVICES ON TREATMENT OF NUCLEAR CASUALTIES.

## ...FUNCTIONS/EQUIPMENT/CAPABILITIES

FUNCTIONS: OPERATE FACILITIES FOR CONDUCTING RADIobiology RESEARCH AND DISSEMINATING RESULTS: CONDUCT ADVANCED TRAINING: PROVIDE ANALYSIS CONSULTATION ON BIOEFFECTS OF RADIATION AND PERFORM OTHER SUCH RESEARCH FUNCTIONS AS REQUIRED. MAJOR EQUIPMENT INCLUDES: PULSE AND STEADY STATE NUCLEAR REACTOR, 200,000-CURIE COBALT-60 IRRADIATOR, ELECTRON LINEAR ACCELERATOR, X-RAY AND THERATRON EXPOSURE CAPABILITY

SUPPORT SERVICES INCLUDE: MEASUREMENT OF RADIATION FIELDS, PROVISION AND CARE OF LABORATORY ANIMALS, EQUIPMENT DESIGN AND FABRICATION ASSISTANCE, REAL-TIME DATA ACQUISITION SYSTEM, TELEVISION AND FILM DOCUMENTATION OF EXPERIMENTS, PERSONNEL AND ENVIRONMENTAL MONITORING, EDITORIAL ASSISTANCE IN REPORT PREPARATION, AND A LARGE TECHNICAL LIBRARY

APPENDIX I

DISESTABLISHMENT, ESTABLISHMENT OR CHANGES IN ORGANIZATION OR NAME\*

DEPARTMENT OF THE ARMY

BIOMEDICAL LABORATORY Aberdeen Proving Ground, MD	DISESTABLISHED Name change
COMMUNICATIONS-ELECTRONICS R&D CENTER Ft. Monmouth, NJ	ESTABLISHED
COMMUNICATIONS R&D COMMAND Ft. Monmouth, NJ	DISESTABLISHED
MEDICAL RESEARCH INSTITUTE OF CHEMICAL DEFENSE Aberdeen Proving Ground, MD	ESTABLISHED Name change from above

DEPARTMENT OF THE NAVY

ARCTIC RESEARCH LABORATORY Barrow, Alaska	DISESTABLISHED
--	----------------

DEPARTMENT OF THE AIR FORCE

NONE

\* Changes since publication of Department of Defense In-house RDTE Activities,  
30 October 1980.

## APPENDIX II

### DEFINITIONS

1. IN-HOUSE RDTE ACTIVITIES--Those organizational entities engaged in performing work in any or all of the categories of research, development, test, and evaluation. The RDTE effort, however, should represent a minimum of 25 percent of the total effort of each entity reporting in order to be considered as an RDTE activity.
2. PROFESSIONALS--Full-time government scientific and engineering personnel actively engaged in RDTE activities. In the case of civilians this will include all those holding positions that fall into the following categories under the Civil Service Occupational Groups and Series of Classes, General Schedule:

101 Social Science	660 Pharmacist
150 Geography	662 Optometrist
180 Psychology	665 Speech Pathology and Audiology
184 Sociology	668 Podiatrist
190 General Anthropology	680 Dental Officer
193 Archeology	690 Industrial Hygiene
401 Biology	695 Food and Drug Officer
403 Microbiology	696 Consumer Safety
405 Pharmacology	701 Veterinary Medical Science
408 Ecology	801 General Engineering
410 Zoology	803 Safety Engineering
413 Physiology	804 Fire Prevention Engineering
414 Entomology	806 Materials Engineering
430 Botany	807 Landscape Architecture
434 Plant Pathology	808 Architecture
435 Plant Physiology	810 Civil Engineering
436 Plant Protection and Quarantine	819 Sanitary Engineering
437 Horticulture	830 Mechanical Engineering
440 Genetics	840 Nuclear Engineering
454 Range Conservation	850 Electrical Engineering
457 Soil Conservation	855 Electronic Engineering
460 Forestry	858 Biomedical Engineering
470 Soil Science	861 Aeronautics Engineering
471 Agronomy	871 Naval Architecture
480 General Fish & Wildlife	880 Mining Engineering
482 Fishery Biology	881 Petroleum Production and Natural Gas Engr.
486 Wildlife Biology	890 Agriculture Engineering
487 Husbandry	892 Ceramic Engineering
493 Home Economics	893 Chemical Engineering
601 General Health	894 Welding Engineering
602 Medical Officer	896 Industrial Engineering
	1221 Patent Adviser
	1222 Patent Attorney
	1223 Patent Classifying
	1224 Patent Examining
	1225 Patent Interference Examining

1226	Design Patent Examining	1370	Cartography
1301	General Physical Science	1372	Geodesy
1306	Health Physics	1380	Forest Products Technology
1310	Physics	1382	Food Technology
1313	Geophysics	1384	Textile Technology
1315	Hydrology	1386	Photographic Technology
1320	Chemistry	1510	Actuary
1321	Metallurgy	1515	Operations Research
1330	Astronomy and Space Science	1520	Mathematics
1340	Meteorology	1529	Mathematical Statistician
1350	Geology	1530	Statistician
1360	Oceanography	1540	Cryptography
		1550	Computer Sciences

Military professionals, both officer and enlisted, actively engaged in RDTE activities should be identified with the functions described in the above referenced civilian job series. Lawyers, accountants, chaplains, social workers, and educators should be excluded.

3. TECHNICIANS--Generally nonprofessionals working on an RDTE project or program in support of a professional. In the case of civilians, it will include, but will not necessarily be limited to, those holding positions that fall into the following categories of the Civil Service Occupational Groups and Series of Classes, General Schedule:

102	Social Science Technician	681	Dental Assistant
181	Psychological Technician	682	Dental Hygienist
404	Biological Technician	683	Dental Laboratory Technician
421	Plant Protection Technician	684	Public Health Dental Hygienist
455	Range Technician	685	Public Health Program Specialist
458	Soil Conservation Technician	688	Sanitarian
462	Forestry Technician	698	Environmental Health Technician
603	Physician Assistant	699	Health Technician
621	Nurse Assistant	704	Animal Health Technician
622	Medical Supply Aid	802	Engineering Technician
625	Autopsy Attendant	817	Surveying Technician
636	Rehabilitation Therapy Asst	818	Engineering Drafting
642	Nuclear Medicine Technician	856	Electronics Technician
644	Medical Technologist	895	Industrial Engineering Technician
645	Medical Technician	1202	Patent Technician
646	Pathology Technician	1311	Physical Science Technician
647	Medical Radiology Technician	1316	Hydrologic Technician
648	Therapeutic Radiological Technologist	1341	Meteorological Technician
649	Medical Machine Technician	1371	Cartographic Aid
650	Medical Technical Assistant	1374	Geodetic Technician
661	Pharmacy Technician	1521	Mathematics Technician
664	Restoration Technician	1531	Statistical Clerical & Administrative
667	Orthotist and Prosthetist	1541	Cryptanalysis
669	Medical Record Librarian		

Discretion will have to be exercised by each RDTE activity in determining the number of military technicians. Generally, they should follow the guidelines established in defining civilian technicians and can be identified in DOD 1312.1

4. REAL PROPERTY COST--Each reporting activity will be responsible for determining and reporting the cost of real property. This cost should be established in accordance with the guidelines and definitions in DOD Instruction 4165.14. This should also include the cost of installed equipment.

5. EQUIPMENT COST--Each reporting activity will be responsible for determining and reporting the cost of personal property. This cost should be established in accordance with the guidelines and definitions in DOD Instruction 4165.14. This should also include the cost of installed equipment.

6. SPACE--The data to be furnished should include only walled and roofed building space. It should not include such things as parking lots, open storage areas, lean-tos, etc. The source of data may be the annual report submitted in compliance with the requirements of DOD Instruction 4165.14.

7. IN-HOUSE OBLIGATIONS--Obligations reported under this category are for activities performed, or to be performed, by the organizational entity. Their work is carried on directly by their own personnel. Particular care should be taken to include under in-house performance the cost of supplies and equipment essentially of an off-the-shelf nature that are procured for use in in-house research and development, plus such things as travel, publications, and other types of services in support of in-house functions and M.P.A. Excluded from the in-house total are expenses for planning and administering programs by DOD personnel of contracts and grants for out-of-house work and M.C.A.

8. OUT-OF-HOUSE OBLIGATIONS--Obligations reported under this category are for activities performed, or to be performed, by other than the organizational entity. Out-of-house performers may include other departmental or DOD organizational entities, industrial firms, educational institutions, not-for-profit institutions, and private individuals. Included as out-of-house work are all expenses paid the out-of-house performers, as well as the expenses incurred in planning and administering these programs by personnel of the organizational entity. This would also include travel and other supporting services.

9. ANNUAL OPERATING COST--This should generally reflect the overhead cost of operating the laboratory or facility. It should include such things as costs of utilities, rents, janitorial services, guard and fire protection, support services such as supply personnel, printing, maintenance of buildings and grounds, etc. It should not include the salaries of direct labor personnel such as scientists, engineers, technicians, draftsmen, machinists, etc.

### APPENDIX III

#### Selected Standard Abbreviations and Acronyms

AAM -- air-to-air missile	GCA -- ground-controlled approach
AAW -- antiair warfare	HF -- high-frequency
ADPE -- automatic data-processing equipment	IFF -- identification, friend or foe
AEDC -- Arnold Engineering Development Center	IR -- infrared
AFSC -- Air Force Systems Command	MPT -- military potential test
AFWET -- Air Force weapons effectiveness testing	NAF -- Naval Air Facility
APG -- Aberdeen Proving Ground	NASA -- National Aeronautics and Space Administration
ARPA -- Advanced Research Projects Agency	NASC -- Naval Air Systems Command
ASW -- antisubmarine warfare	NAVORD -- Naval Ordnance Systems Command
AUS -- Army United States	NAVSHIP -- Naval Ship Systems Command
BIS -- Board of Inspection and Survey	NEMP -- nuclear electromagnetic propagation
BW -- biological warfare	PI -- product improvement
CBR -- chemical, biological radiological	POL -- petroleum oil, lubricants
CE -- Chief of Engineers, Army	QA -- quality assurance
CG -- commanding general	QMDO -- qualitative materiel development objective
CNO -- Chief of Naval Operations	QMR -- qualitative materiel requirement
COMMEL -- communications electronics	RDTE -- Research, development, test and evaluation
DA -- Department of the Army	RF -- radio frequency
DARCOM -- Department of the Army Materiel, Development, and Readiness Command	RV -- reentry vehicle
DASA -- Defense Atomic Support Agency	SATS -- short airfield tactical support
DOD -- Department of Defense	SDR -- small development requirement
DZ -- drop zone	SI -- ship installation
ECM -- electronic countermeasures	SP -- self-propelled
ED -- engineering development	ST -- service test
EDT -- engineering development & test	T&E -- test and evaluation
EEG -- electroencephalogram	UDT -- underwater demolition team
EKG -- electrocardiogram	ULMS -- Undersea Long-Range Missile System
ELINT -- electronic intelligence	USATECOM -- US Army Test and Evaluation Command
EMP -- electromagnetic propagation	UTTAS -- utility tactical transport aircraft system
EMW -- electromagnetic warfare	USW -- undersea warfare
EODC -- Explosive Ordnance Disposal Center	UV -- ultraviolet
ET -- engineering artillery	V/STOL -- vertical/short takeoff and landing
FA -- field artillery	
FBM -- fleet ballistic missile	

APPENDIX IV

KEY WORK OR ACTIVITY

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